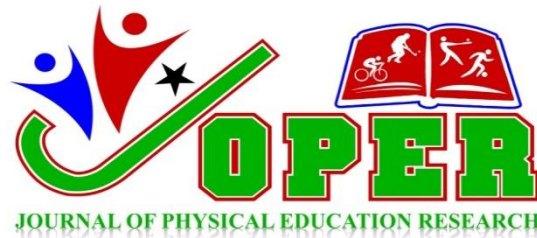


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Journal of Physical Education Research (JOPER) is a scientific publication. It is a peer reviewed and referred journal, officially publishes original research articles on Physical Education and its allied sciences in printed and online version. JOPER is an open access international journal has four annual issues i.e. March, June, September and December with its own issue number and supplements if necessary. It is devoted to the promotion of physical education and allied sciences.

The experiences of different countries are very important to share on a platform like this. Therefore, this international journal serves to bring scholars from divers' background interns of their domain of specialization and scholarships and will enrich our understanding of various issues related to the physical education and sports. It also provides an International forum for the communication and evaluation of data, methods and findings in physical education and allied sciences. Based on the international character of the Journal, the articles/research papers can be published by authors from all over the world.

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EDITORIAL

The word happiness and pleasure are defined to its extreme in presenting the second issue of Journal of Physical Education Research (JOPER) as a revolutionary research journal in the field of Physical Education to the beloved and generous readers.

The overwhelming response from contributors to the JOPER is indicating enough that the journal has generated abounding interest among committed researchers who are engaged in promoting physical education and sports through published literature.

As we know new techniques, abilities scientific methods of evolving performance have become a regular feature in modern times. All this needs detailed thought provoking research, experimentation. Our effort is to bring to our readers such efforts of our professional colleagues. This issue of Journal covers various aspects of the physical education such as: physical fitness, body composition, sports psychology, physiology, teaching methods, sports training, yoga, etc.

We wish to thanks all our authors and the editorial team for their precious contribution and generous support in making JOPER a priority. We also thank our dedicated advisors, board members and reviewers, as well as our tireless editorial members.

We do hope that readers will definitely get benefited by these articles and get motivated to share their own ideas, research studies related to Physical Education and Sports with us.

Arif Mohammad, Ph.D.

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BODY COMPOSITION: AN ANALYSIS BETWEEN THE FOOTBALLER AND THANG-TA PRACTITIONER OF MANIPUR

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ABSTRACT

The objective of the present study was to analyse and differentiates the body composition between footballers and thang-ta practitioners of Manipur. On the view, the significance of the underlying variables like, Age, Height Weight, BMI, Kaj, Kcal, %fat, FM, FFM and TBW, were studied with the help of Body Composition Analyser (TBF-300, Tanita, Japan). Altogether 40 footballers and 40 thang-ta practitioners of Manipur were randomly selected for the present investigation by using Tanita body composition analyzer, which is based on bioelectrical impedance analysis method for a better understanding of body composition variables among the Footballers and Thang-Ta practitioners. The results of the present study reveals that age, height, BMI, FM, FFM and TBW variables were significant at $p=0.05$ probability level of significance. The presence of this pattern of significance is also observed between two groups' e.i., Thang-Ta practitioners and Footballers. Based on the results, it can be concluded that both the study population have the similar body composition on BMR in Kaj& kcal. But the % of fat was having less by Thang-Ta practitioners than the footballers. The body composition of Footballers and Thang-Ta practitioners of Manipur was less value on % fat and BMR then the standardized recommended body fat for men athletes. Therefore, to have an optimal body composition is important for their fitness as well as to enhance their performance with the view to be prospective players.

Keywords: Body composition, BMI, Fat%, FM, FFM, TBW.

1. INTRODUCTION

In studies of the effects of physical conditioning and athletic training, analysis of body composition is frequently employed. Most commonly, relatively simple

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procedures are utilized such as anthropometrically determined breadths; widths; and circumferences; skin folds; body typing; underwater weighing; or more recently, body impedance analysis. Unfortunately, these methods are quite descriptive and for the most fail to provide information about the more basic components of body composition, for example, water, protein, bone mineral, and fat. There are methods for assessing these basic components but for the most part the equipment and methods for doing so remain laboratory and clinical procedures that are difficult to utilize on a large scale. A brief discussion of the recent history of body composition is presented, followed by consideration of techniques likely to supply the “criterion” information required to validate simpler methods with widespread utility (McCloy, 1987).

In physical fitness, body composition is used to describe the percentages of fat, bone, water and muscle in human bodies. Because muscular tissue takes up less space in our body than fat tissue, our body composition, as well as our weight, determines leanness. Body composition is the body’s relative amount of fat to fat-free mass. Those with composition are typically healthier, move more easily and efficiently, and in general, feel better than those with less-than-ideal body composition. If you can achieve a better body composition goes a long way toward improving your quality of life and overall wellness.

Body composition is divided into two separate types of mass: fat-free mass which is comprised of all of the body’s non-fat tissues and body fat. Fat-free mass includes bone, water, muscle, and tissues. Body fat is literally fat located within the body. Some fat is necessary for overall health; it helps protect internal organs, provides energy and regulates hormones that perform various functions in body regulation. However, when someone is overweight or obese, they have an excessive accumulation of body fat.

Body fat includes essential fats, such as lipids, and nonessential body fats; these fats make up around five percent of total body weight for men, and up to 12 percent for women. Nonessential fat is found mainly within fat cells and adipose tissue, below the skin and surrounding major organs. The amount of nonessential fat stored in the body is variable among individuals on factors such as age, gender, and diet. Excess nonessential fat can normally be attributed to consuming more food energy than what is burned through metabolic functions and activity.

Body fat percentage is the percentage of total body weight that is comprised of fat. Decreasing your body fat percentage, if it is too high, isn’t just about improving your appearance. A high percentage of body fat can have a negative effect on your overall well-being: Excess fat has been linked to numerous health problems such as increased risk for diseases such as cancer, diabetes and heart disease. Having excess fat, specifically surrounding the internal organs, can damage your health and contribute to serious medical conditions such as liver disease.

Body Mass Index (BMI) is a commonly-used method of measuring body fat. While BMI does not measure body fat directly, it helps to assess health risks related to body mass. Ways to assess your body composition, and body fat percentage, more directly include measurement with calipers and tests such as underwater body fat test, the Body Pod, DEXA Scan, and Bioelectrical Impedance. Weighing on a regular bathroom scale does not truly assess the body composition, because a regular scale cannot tell the difference between how much of the total weight is comprised of water, fat, or muscle.

2. METHODS AND MATERIALS

2.1 Study Design and Area

The present study was a cross sectional study carried out in the Department of Physical Education and Sports Science, Manipur University in the year of 2014.

2.2 Subjects

Eighty players i.e. 40 Football players from Sports Authority of India, North East Regional Centre, Takyel, Manipur and 40 Thang-Ta players from Thang-Ta and Huyenlanglon Training Centre, Keirao, Manipur were selected for the study. Age of the Footballers and Thang-Ta practitioners were in the range of 14-24 yr. and 15-19 yr. respectively. The mean weights of the Footballers and Thang-Ta subjects were 60.92 ± 5.00 kg. (range 53.1-70.6 kg.) and 51.7 ± 6.3 kg. (range 41.2-73.0 kg.). The height of the footballers were in the range of 161-178 cm (mean 167.9 ± 4.51 cm), whereas in Thang-Ta, it was in the range of 137-176 cm (mean 159.37 ± 6.8 cm).

2.3 Identification of Variables

Body weight and various other body composition variables like body fat %, body fat mass (FM), fat free mass (FFM), body mass index (BMI), and total body water (TBW) were studied with help of Body Composition Analyzer (TBF-300, Tanita, Japan). Height was measured using an anthropometry set to the nearest 0.5 cm and age was recorded from their identity card issued by the respective institutes.

2.4 Procedure

The players were instructed to report on the appointed day at their respective training centre after a sound night's sleep free from any physical exertion on the

day of the test and three hours after a light breakfast. The height and age of the players recorded, and they were made to relax for half an hour and were asked to empty their bladder before recording the body composition parameters in the department. Body composition parameters recorded were fat %, body fat mass, fat free mass and total body water. Body Composition Analyzer was used to record the above parameters. Then they were asked to stand on the footpad of the instrument with minimum clothing and barefoot. The fat percentage recording will be displayed on the display panel and a paper with all recorded parameters comes out automatically from the left upper corner of the instrument.

2.5 Statistical Analysis

Descriptive statistics like mean, variance and correlations was employed and compared between body composition parameters and age, height, weight of the subjects were calculated. SPSS 14.0 for Windows Evaluation Version, Software was used in analyzing the data.

3. RESULTS

Table 1: Body composition parameters mean, SD and *r* values of the study subjects

Parameters	Football (N=40)		Thang-Ta (N=40)		<i>r</i> values
	Mean	SD	Mean	SD	
Fat (%)	10.25	4.53	9.49	3.85	+0.03
FM (kg)	6.31	2.83	4.94	2.12	+0.08
FFM (kg)	54.76	4.62	46.82	5.84	-0.05
TBW (kg)	40.08	3.38	34.02	4.47	-0.02
BMI (kg/m ²)	21.58	1.22	20.39	2.33	+0.06

Table 1 shows the Mean, SD and *r* values of the Body Composition parameters of the study subjects. The Thang-Ta practitioners (mean 9.49 ± 3.85) were having less fat than the Footballers (mean 10.25 ± 4.53) with the value of $r = +0.03$. The Thang-Ta practitioners (mean 4.94 ± 2.12) were having less fat mass than the Footballers (mean 6.31 ± 2.8) which was statistically significant ($p < 0.05$) with the correlation value of +0.03. Footballers were having more FFM, TBW and BMI than Thang-Ta practitioners with the significance at ($p < 0.05$) whereas *r* values were -0.05, -0.02 and +0.06 respectively.

Table 2: Body parameters mean, SD and *r* values of the study subjects

Parameters	Football (N=40)		Thang-Ta (N=40)		<i>r</i> values
	Mean	SD	Mean	SD	
Age	19.1	2.30	16.7	1.5	+0.10
Height	167.9	4.41	159.37	6.86	-0.05
Weight	60.92	5.00	51.76	6.30	+0.00

Table 2 shows the body parameters mean, variance and *r* values of the footballers and Thang-Ta practitioners of this study. The Thang-Ta practitioners (mean 16.7 ± 1.5) were found to be younger in age than the Footballers (mean 19.1 ± 2.3) with the value of $r = +0.10$. Whereas height and weight also less than footballers with statistically significant ($p < 0.05$) with the correlation value of -0.05 and +0.00 respectively.

4. DISCUSSION

Eighty players consisting of 40 footballers and 40 Thang-Ta practitioners were studied. Footballers were older, heavier and taller than Thang-Ta counterparts. The BMI of the footballers were in the range of 19-24 kg/m² (mean 21.58 ± 1.2 kg/m²) whereas in Thang-Ta practitioners, it was in the range of 17.1-25.9 kg/m² (mean 20.39 ± 2.33 kg/m²). The differences in age, height, weight, BMI, fat mass, fat free mass and total body water were statistically significant at ($p < 0.05$) level of significance. The body compositions are important morpho-physiological characteristics. The proportions of these components are different in Footballer and Thang-Ta practitioner of Manipur. Such sports differences exist even when the amount of fat, muscle and bone are expressed as percentage of body weight. It is not known how much of this difference in body fat is biologic or how much is related to behavioral factors. More than likely, hormonal differences play an important role (Suresh, 2004).

Several techniques have been designed for the assessment of body composition in human. However, there is no single method available that meet the stringent criteria set for an ideal method (Garrow, 1982). Though the underwater weighing (densitometry) method is identified as the “gold standard” technique, many newer methods from very simple to sophisticated have been developed for the estimation of body composition in human (WHO, 2003). Lukaski (1987) has reviewed the merits and demerits of these methods. Despite certain limitations in each of this method, the bioelectrical impedance analysis (BIA) technique is a non-invasive, relatively easy and reliable method (Abu, McCutcheon, Reddy, Pearman, Hunter, & Weinsier, 1988) and there is increasing interest in the use of

the BIA technique in the study of human body composition (Richard, Chumlea, & Alex, 1989).

In the present study, the Footballers were taller and heavier than the Thang-Ta practitioners of Manipur. Again, the Thang-Ta practitioners were having less fat % and body fat mass than the footballers; whereas the Footballers are having more fat free mass and total body water than the Thang-Ta practitioners. These findings are comparable with the deference between a reference to determining the desired fat % for men and women athletes by Shaver (Shaver, 1982). However, both the Footballers and Thang-Ta practitioner of Manipur were shorter and lighter than the reference players respectively. This is because of the fact that these references are based on Western population.

5. CONCLUSIONS

In the present study on body composition of the footballer and thang-ta practitioner, fat %, BMI, TBW were lesser to that of an athlete. To have an optimal body composition is important for both the footballers and thang-ta practitioners not only to enhance their performance but also to lead to a healthy living.

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THE RELATIONSHIP BETWEEN PHYSICAL ACTIVITY IN GREEN SPACE AND HUMAN HEALTH AND WELLBEING: AN ECOLOGICAL DYNAMICS PERSPECTIVE

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ABSTRACT

Lifestyle diseases such as obesity, diabetes, and cardiovascular diseases are on the increase worldwide. This study examines the distinctive effects of exercise in green space compared to other contexts. There is growing evidence that physical activity in nature has considerable positive effects on human health far beyond those benefits assumed by physical activity alone, despite a reduction in opportunities for green exercise. A systematic literature review was undertaken to examine the evidence on the importance of physical activity in green space from different theoretical sub-disciplines including psychiatry, psychology, outdoor education, sport and exercise psychology and leisure, and recreation. Thematic categories were created to establish the effects of green space and green exercise on different yet inter-linked aspects of human health and well-being, both physical as well as mental. Our systematic review led us to apply ideas from a new theoretical perspective that contributes to existing understanding of how physical activity in green spaces (green exercise) might provide physical benefits and enhance mental health and wellbeing. This perspective, known as Ecological Dynamics, focuses on the relationship between the individual and environment in providing a functional explanation for the enhancement of physical and mental health and wellbeing. From this study it is theoretically rationalised that physical activity in green space, compared to other popular contexts, is more effective in enhancing physical and psycho-social wellbeing.

Keywords: Physical activity, human health and wellbeing, green space, green exercise, Ecological Dynamics.

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1. INTRODUCTION

There is growing evidence from disciplines such as psychiatry, ecology, psychology, architecture and planning, medicine, health, leisure and recreation that contact with nature and physical activity in nature (green exercise) have considerable positive effects on human health (Barton & Pretty, 2010; Brymer, 2009a; Brymer & Oades, 2009; Gorrell, 2001; Leather, Pyrgas, Beale, & Lawrence, 1998; Maas, Verheij, de Vries, Spreeuwenberg, Schellevis, & Groenewegen, 2009; Maas, Verheij, Groenewegen, de Vries, & Spreeuwenberg, 2006; Maller & Townsend, 2006; Maller et al., 2008; Mayer, Frantz, Bruehlman-Senecal, & Dolliver, 2009a; Reser, 2008; Townsend & Moore, 2005). In a recent review of the health benefits of exposure to nature Maller et al. (2008) stated: 'That the natural environment is a key determinant of health is unquestionable' (p. 5). While increases in physical activity enhance various health dimensions, the benefits of green exercise cannot be explained by increased physical activity alone. These observed benefits seem to be directly linked to the relationship between human beings and nature (Maas, Verheij, Spreeuwenberg, & Groenewegen, 2008). Paradoxically, development of an urbanised lifestyle has reduced opportunities to interact with the natural world since industrial revolution, a trend which is continuing (Maller, et al., 2008; Townsend & Moore, 2005).

Research focusing on young people also shows that they are spending less time outdoors (Hofferth & Sandberg, 2001; Rydberg, 2007a, 2007b). Hofferth and Sandberg (2001) reported that American children under the age of 12 years spent on average 34 minutes a week outdoors compared to 12 hours a week watching television. Between 1997 and 2003 the proportion of 9-12 year olds who spent time playing outside declined by 50 percent (StGeorge, 2007). Louv (2008) considered this disconnection a crisis which he termed "Nature Deficit Disorder." The aim of this article is to outline how physical activity in the natural world might enhance health. First, we outline current knowledge on the human health and wellbeing benefits of physical activity in green spaces. Second, we will present a theoretical perspective from ecological dynamics to offer an explanation on how these benefits might occur.

The Health Benefits of Green Exercise

Psychologists and philosophers have recognised the importance of the natural world to human health and wellbeing (Deloria, 1994; Dewey, 1958; Harvey, 2000; Jung, 2008; Marano, 2008; Watts, 1970; Watts, 2003). In recent years, the relationship between the natural world and health has been explored from various perspectives. Examples include ecopsychology, outdoor education and recreation, wilderness and adventure experiences, green exercise, psychiatry, public health

and horticulture (Brymer & Cuddihy, 2009; Brymer, Schweitzer, & Sharma-Brymer, 2010; Doucette, Ransom, & Kowalewski, 2007; Duncan, 1998; Herzog & Strevey, 2008; Noddings, 2006; Wilson, 1984). Researchers have described the health benefits of viewing nature (Leather, et al., 1998), interacting with nature (Kaplan & Talbot, 1983), green spaces in urban environments (Tzoulasa et al., 2007), brief encounters in nature (Hull, 1992; Woolley, 2003) and extended encounters in nature (Hull & Michael, 1994) and even the benefits of exposure to actual nature as compared to virtual nature and (Mayer, et al., 2009a). In the following sections we review literature that focuses on the role of the natural world for the development of positive health.

Exposure to nature has been shown to improve health and wellbeing (Brymer, Cuddihy, & Sharma-Brymer, 2010; Nisbet, Zelenski, & Murphy, 2011; Pretty et al., 2007; Wolsko & Hoyt, 2012), relieve stress and provide a restorative experience (Leather, et al., 1998; Wolsko & Hoyt, 2012), increase positive mood (Korpela, Kyttä, & Hartig, 2002; Maller, Townsend, Pryor, Brown, & St Leger, 2006), enhance life skills (Mayer & Frantz, 2005), reduce mental fatigue and increase concentration (Maller, et al., 2008) and reduce the tendency for aggressive behaviour (Kuo & Sullivan, 2001). Mayer, Frantz, Bruehlman and Dolliver (2009b) reported on three studies that examined the effects of exposure to nature on positive affect and the ability to reflect on a life problem. A comparison was done between a 15-minute walk in a natural setting and urban context, as well as watching a video of nature and watching a video of an urban setting. They found that both emotional wellness and the ability to reflect on a life problem were enhanced by exposure to actual and virtual nature, compared to urban settings. The influence of actual nature was most acute.

Adventurous activities undertaken in green spaces have also been linked with psychological and emotional benefits (e.g. Brymer & Oades, 2009; Brymer & Schweitzer, 2012) and many programmes are intentionally designed to provide an environment for enhancing psycho-emotional issues such as communication, self-esteem, self-efficacy and self-confidence (Hattie, Marsh, Neill, & Richards, 1997). An early research finding, focusing on using wilderness activities for improving self-concept recommended long and continued wilderness participation (Schreyer, Williams, & Haggard, 1990). Duncan (1998) reported that natural settings can also enhance self awareness and acceptance. However, he stated that measuring and understanding the psychological benefits of visiting wilderness areas remains one of the least developed and understood bodies of knowledge about wilderness.

Researchers have addressed various issues of childhood and youth behaviour, and established positive links between physical activity in nature and improved behaviour (Banderoff & Scherer, 1994; Han, 2009; Humberstone & Lynch, 1991; Kuo & Taylor, 2004; Louv, 2009; Noddings, 2006; Riebel, 2001;

Robertson & Kiewit, 1998; Russell, 2002, 2003). Exploration in the outdoors, gardens, backyards, parks, wilderness and many such environments are said to encourage and nurture curiosity, engagement, focused learning, mindfulness and reflective practice (Han, 2009; Pretty et al., 2009; Said, 2006; Stolar, 2009; Ungar, Dumond, & McDonald, 2005; Wells, 2000). Taylor and others (Kuo & Taylor, 2004; Taylor, Kuo, & Sullivan, 2001) have also demonstrated that engagement with nature positively influences concentration and behaviour of children diagnosed with Attention Deficit Disorder. Research is also finding that opportunities to interact with nature in childhood are important for the promotion of positive psycho-emotional behaviours for future adults. For example, Mayer and Frantz (2005) considered that opportunities to connect with nature in childhood promote the value of green spaces for refuge from stress and anxiety (Mayer & Frantz, 2005).

Green exercise has also been shown to decrease anxiety and depression. For example, MacKay & Neill (2009) investigated the relationship between state anxiety and exercise intensity, reporting that higher degrees of perceived greenness of the exercise environment were associated with greater reductions in state anxiety. However, exercise intensity and duration did not impact state anxiety. Another research project that compared a walk in nature with a walk in a shopping centre demonstrated that the former significantly counteracted depression and increased self-esteem (Barton, Hine & Pretty, 2009). Kaplan et al. (2009) showed that an hour's walk in a park at any time of year can increase attention and memory by twenty percent. Pretty, Hine and Pretty (2007) found that a regular walk in an urban green space can increase subjective experiences of mental and emotional wellbeing. Harris (2009) reported that gardening provided an opportunity to develop self-esteem in refugee and migrant communities in Queensland.

Natural environments have been shown to produce an altered state of consciousness (ASC). Research by Kjellgren and Buhrkall (2010) demonstrated that being immersed in the natural environment produces a greater ASC than exposure to a simulated environment. Phenomenological analysis identified six categories of positive experiences: intensified sensory perception; a feeling of harmony and union with nature; well-being and quality of life; renewed energy and awakening; a 'here and now' thinking and a 'sense of tranquillity.' Peak experiences, (described as states of optimal mental health and wellbeing), wilderness experiences and adventure experiences possess elements that can evoke transpersonal experiences (Roscoe, 2009). These experiences can range from momentary events with minimal lasting effect to intense events with life-transforming consequences. Peak experiences are often characterised by awe and reverence, a feeling that the world is unified, ineffability, and a sense of bliss and ecstasy (Brymer, 2005; Davis, 1998). Schreyer, Williams and Haggard (1990)

highlighted that such values were important in the process of effective self-concept formulation. They concluded by indicating that wilderness settings are important for the enhancement of wellbeing.

In summary, research is demonstrating considerable evidence that the green element in non-human nature has a profound influence on human physical/mental health and wellbeing. Exposure to virtual nature, opportunities to view nature through a window, experiences of brief encounters with nature, programs that emphasise extended encounters with nature and even bringing nature indoors seems to be beneficial for mental health and wellbeing and wellbeing. However, it is difficult to determine how nature-based activities enhance health and how we can best use nature-based activities in preventative psycho-physical medicine (Fjortoft, 2001; Korpela&Ylen, 2007; Maas, et al., 2008; Velarde, Fry, & Tveit, 2007). Investigations into the role of green exercise have often relied on explanations that focus on the form (colour or physical appearance) of nature (Bodin & Hartig, 2003; MacKay & Neill, 2009). In the following sections we outline a theoretical perspective that complements and adds to our understanding of how physical activity in green spaces (green exercise) might encourage positive mental health and wellbeing. This perspective is termed ecological dynamics which opens up the possibility for a functional explanation for the enhancement of mental health and wellbeing.

An Ecological Dynamics Approach

“Ecological dynamics” is a framework capturing the integration of key ideas of learning in ecological psychology and dynamical systems theory (Warren, 2006). Ecological dynamics is concerned with understanding change in human behaviour over different timescales. It is a popular model of learning and development in a variety of fields including human movement science, psychology and physical education (Araújo & Davids, 2011; Chow, Davids, Hristovski, Araújo, & Passos, 2011; Davids, Button, & Bennett, 2008). An ecological dynamics approach emphasises the importance of the interaction between an individual and the environment. Here we develop the proposition that the ecological dynamics model is ideally suited to explaining how green exercise enhances effective psycho-emotional development.

Ecological dynamics has an inherent foundation in the complexity sciences, motivating a view of the learner as composed of many independent but interacting subsystems (physical, cognitive, social, emotional, etc.). We propose that an ecological dynamics model, predicated on an interactive relationship between the learner and environment, provides a more functional approach than some traditional models which contain an inherent ‘organismic asymmetry’ (Dunwoody, 2006). Araújo and Davids (2011) argued that the concept of

organismic asymmetry refers to an inherent bias in science for seeking explanations of human performance and behaviour based on internal mechanisms and referents. For example, cognitive psychology typically focuses on the role of conscious mental life, with little reference to the role of the environment in shaping behaviours. This biased tendency is avoided by considering the individual-environment relationship as the relevant scale of analysis for understanding human development. Adopting the person-environment relationship as a scale of analysis for understanding the development of psychological health provides an opportunity to address the role of individual differences. From this perspective, a more substantive emphasis needs to be placed on understanding how learning emerges from each individual as they attempt to satisfy a range of personal, task and environmental constraints impinging upon him/her at any moment in time (Davids, Button & Bennett, 2008). A key aspect of ecological psychology, affordances, might be useful to explain how interaction with the natural world in the form of green exercise provides an essential conduit to effective promotion of positive health.

Traditionally, the concept of affordances in ecological psychology simply describes opportunities for action that combine the objective nature of the environment with the subjective nature of an individual (or organism) (Gibson, 1979; Sanders, 1993). Affordances from this perspective are neither objective nor subjective as they exist based on characteristics of both the individual and the environment. More recently, affordances have been recognised as environmental opportunities that invite action (Withagen, de Poel, Araujo, & Pepping, 2012). What this suggests is that theoretical perspectives that focus on the form and shapes of nature (how nature looks) might be limited as a theoretical explanation. Instead ecological dynamics proposes that the function of nature is a more effective medium for analysis (Said, 2012). Further the functional aspects of the natural world actually invite or encourage particular actions.

This traditional understanding of affordances as proposed by Gibson has been enhanced in more recent times through combining ecological psychology with dynamic system theory and the development of ecological dynamics. From an ecological dynamics perspective the notion of affordances can be extended beyond opportunities for physical action to include opportunities for a variety of human experiences including those from the social, cognitive and emotional domains. In this way affordances might be useful for understanding how physical activity in green spaces enhances mental health and wellbeing.

2. METHODS AND MATERIALS

Keeping the central focus on the benefits of physical activity in green spaces on human health a systematic literature search was undertaken. Literature was

searched over a period of approximately 40 hours in 2012 using search engines such as Academic Research Library, BioDigest, PsychINFO, Medline, Meditext and Academic Search Elite. The databases used included the Queensland University of Technology library, Google Scholar and Google Advanced Search. Key words that were used for the literature search were green exercise, outdoor physical activity, outdoor recreation for health benefits, being in green space, greenery for human health, being in nature for health reasons, ecological benefits on human health, nature and human health, human health and nature. Over 500 hundred different sources were pooled together for further synthesis.

After screening the abstracts of 500 different sources 50, including original research articles, research reports and research-based books, were separated for a detailed analysis to see if the research studies were suitable for the use of our study. A final analysis of the selected 50 sources yielded 26 studies that were reported as original research in peer-reviewed journals. Among these 13 each of qualitative and quantitative studies have been utilised for this paper.

Within the group of published journal articles, the first criterion was to identify the author/s' positive emphasis on the element of green space linked with human health in general, and secondly, their assertion of health benefits of physical activity in green space. Both these criteria created a broad scope to place the orientation of the study with green space not being limited to outdoor environment, natural world, greenery, green woods or indoor environments with the presence of green space. It included both actual and virtual environments with a green element in them. The literature search yielded a rich range of journal articles dedicated to the demonstration of the relationship between benefits of physical activity in green space, engagement with green space and improvement in health. The diversity of the articles included nature-based physical activity, urban landscape and design, benefits of green space on children's wellbeing, and traditional health benefits from green space. Within the group of conference papers, reports, magazine articles, books, book chapters and web resources, the criterion was once again to identify the positive health benefits of physical activity in green space. The information was scrutinised to classify under thematic categories. Thematic categories with separate headings such as Human health and nature in general, Human health, physical activity and nature, Health benefits of being in nature, Green exercise and health, Physical activity in Green space and outcomes. Key focus of each source under each of these categories was noted down to refocus the literature search on one topic – that is, establishing the case of health benefits of physical activity in green space from an ecological dynamics perspective.

3. RESULTS & DISCUSSION

An analysis of experimental studies, both qualitative and quantitative, reveals two major themes that support the thesis that green exercise is beneficial for health. The first supports the physical affordances notion in that physical activity in green spaces provides an opportunity for more varied action. The second shows that physical activity in green spaces supports a psycho-emotional restoration.

From a physical perspective it is the physical opportunities apparent in the natural world that supports physical health. As an example a nature scene with mountains in the distance and trees in the foreground could be described in terms of what it looks like or it could be described in terms of what it offers for human interaction (e.g. opportunities to climb, jump, swing and so forth). A given environment will have specific properties and opportunities that invite action; however a person perceives, utilises and shapes these opportunities for action from their own unique perspective. For example, two learners in a wood would be working with the same environmental properties but differences in limb length and body length would result in different perceptions and actions. Objectively, a tree might have climbing affordances but because of different body sizes, emotional readiness or age not all children will be able to take advantage of the affordance. Equally cultural expectations might limit a person from perceiving the climbing affordance. The same crag might present different affordances for movement for someone with short limbs as opposed to someone with long limbs. At the same time an action that is simple to undertake in dry conditions, such as climbing a small boulder, might present different complexities when wet. Affordances are not static they change as a function of time and context. For example exhausted learners perceive inclines to be steeper than when they are not exhausted (Bhalla & Proffitt, 1999). This variety and complexity of possible opportunities for action invites interaction and therefore increases physical health. From a mental health perspective these same physical affordances invite focus and remove noise. For example, mindfulness or the experience of non-judgemental presence has also been associated with positive mental health and wellbeing and in particular eudaimonic wellbeing (Shaver, Lavy, Saron, & Mikulincer, 2007). Hedonic wellbeing describes the state of “feeling good” whereas eudaimonic wellbeing describes a more “functional” experience of life satisfaction and an experience of living a fulfilled life (Howell, Dopko, Passmore, & Buro, 2011). Mindfulness has been defined as a state of consciousness that involves a particular non-judgemental awareness and attention. Brown and Ryan (2003) define mindfulness as “an enhanced attention to and awareness of current experience or present reality” (p.822). They continue by asserting that the attention and awareness is an “open or receptive awareness” (p. 822). Mindfulness has been credited with the ability to disengage individuals from automatic thoughts and encouraging healthy behaviours. While research in this area is still young, studies are reporting that the natural world provides a rich

array of sensory possibilities that invite mindfulness (Rothaupt & Morgan, 2007). Howell et al. (2011) reported on two studies that attempted to investigate the relationship between wellbeing, mindfulness and feelings of connection to nature. While they could not determine cause and effect they did determine that “higher degrees of connectedness to nature were associated with greater wellbeing and greater mindfulness” (p. 169). Although mindfulness is typically associated with a deliberate act of mindfulness cultivation, Jacob, Jovic, & Brinkerhoff (2009) argue that mindfulness can also spontaneously arise from environmental cues. From this perspective being in nature can trigger mindfulness affordances and experiences of total engagement, non-judgement and being at one with the natural world (Brymer & Gray, 2010a, 2010b; Mayer & Frantz, 2004).

In summary, Gibson (1979) theorised that the natural environment affords more intense and varied activity than standardised environments. However, Gibson’s focus was on physical affordances. The ecological dynamics approach empathises the multi-dimensionality of human beings and recognises that affordance theory also allows for other opportunities such as social and emotional affordances. As such the ecological dynamics model extends the ecological psychology concept of affordances to show that the natural environment affords more intense and varied opportunities to enhance mental health and wellbeing. Beyond this observation, research suggests that the natural world is unique in that the affordances are also more challenging and more complex than those afforded through man-made environments.

4. CONCLUSIONS

Green exercise or physical activity in green spaces has been associated with positive Physical/mental health and wellbeing benefits. Traditional theoretical perspectives focus on explaining why physical activity in green spaces might enhance mental health and wellbeing and emphasise the role of the innate connection between humans and the natural world, the restorative effects of nature and the experience of being part of something larger. Ecological dynamics adds to current perspectives by theorising how physical activity in green spaces might enhance mental health and wellbeing. From this perspective the natural world is described in terms of the affordances for psycho-emotional and physical interactions it offers to each individual. Further work is needed to understand how the natural world might uniquely provide more challenging, complex, varied and intense affordances. There is a need to explain how individuals are invited to experience a broad range of perceived pleasurable and non-pleasurable emotions and to experience undertaking actions despite these emotions. Equally it is important to investigate how the complexity of affordances might also support

other opportunities to enhance psycho-emotional health and wellbeing characterised by mindfulness, non-judgement, peace and calm.

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PHYSIOLOGICAL AND ENDURANCE PERFORMANCE OF SOCCER PLAYERS IN RELATION WITH DIFFERENT EXERCISE INTENSITIES

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ABSTRACT

This study was aimed to investigate the effects of exercise intensities on physiological and endurance performance efficiency male soccer players. The subjects of this study were twenty male soccer players (ten players in each group) and they were purposively selected and randomly assigned in each group. The analysis were carried out by the descriptive statistical analysis coded and analysed using SPSS version 20 software. Anthropometric (height, weight and body mass index), physiological (resting heart rate and blood pressure), and endurance performance (12 min run and Bruce incremental test) variables were tested by digital scale in meter, digital balanced beam scale in kilogram, and body mass index was calculated, Sphygmomanometer and stop watch before, during and after intervention of exercise intensities within 12 weeks of the study period. Therefore, both in high and moderate intensity training statistically significant mean difference were observed in RHR, SBP, DBP, and Cooper test at ($p < 0.05$). This study showed that exercise intensities increased physiological and endurance performance efficiency of the soccer players in high and moderate intensity endurance training, but a better mean difference were observed in moderate intensity training group.

Keywords: Endurance, exercise, intensity, soccer player.

1. INTRODUCTION

Soccer requires a number of physiological qualities to perform at the highest intensity and skill execution with an exceptionally high standard of technical ability, as well as a tactical understanding of the game. Physical qualities include aerobic, anaerobic endurance, agility, and sprinting ability, jumping and kicking

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power. Like elite sprinters or distance runners, soccer players generally have extraordinary capacities in one single physical quality (Hoff & Helgerud, 2004).

Good performance in soccer consists of many factors, including excellence in games skills, cognitive abilities to make correct decisions within the game, moderate to high aerobic and anaerobic power (Reilly, Bangsbo, Franks, 2000). Aerobic exercise (also known as cardiovascular exercise) is physical exercise of relatively low intensity that depends primarily on the aerobic energy-generating process (Sharon & Denise, 2007). Aerobic literally means “living in air” (Kenneth, 1997), and refers to the use of oxygen to adequately meet energy demands during exercise via aerobic metabolism (William, Frank, & Victor, 2006).

Generally, light to moderate intensity activities that are sufficiently supported by aerobic metabolism can be performed for extended periods of time (Sharon & Denise, 2007). High-intensity interval training has also been shown to improve athletic performance. For already well-trained athletes, improvements in performance become difficult to attain; increases in training volume may yield no improvements. Previous research would suggest that, for athletes who are already well-trained, improvements in endurance performance can be achieved through high-intensity interval training. A 2009 study by Driller, James, John, Cecilia, and Andrew showed an 8.2 second improvement in 2000m rowing time following 4 weeks of HIIT in well-trained rowers.

The accumulated oxygen deficit is an accurate measure of the anaerobic energy release during treadmill running (Medbø, Mohn, Tabata, Bahr, Vaage, & Sejersted, 1988) and bicycling (Medbø & Tabata, 1989). This principle may allow examination of the anaerobic capacity (Hermansen, Medbo, Mohn, Tabata, & Bahr, 1984), taken as the maximal accumulated oxygendeficit during 2-3 min of exhaustive exercise (Medbø, *et al.*, 1988; Medbø & Tabata, 1989).

During high-intensity exercise lasting more than a few seconds, adenosine triphosphate (ATP) is resynthesized by both aerobic and anaerobic processes (Medbø & Tabata, 1989). The ability to resynthesize ATP may limit performance in many sports. Thus, the training of athletes for sports involving high-intensity exercise should improve the athletes' ability to release energy both aerobically and anaerobically. The success of different training regimens can and should be evaluated by the athletes' performance. Therefore, the effect of specific training on the anaerobic capacity may be evaluated by measuring the athletes' performance before and after training.

Thus, the researcher hypothesized that; high intensity exercise could have a positive effects on physiological and performance efficiency on soccer players and moderate intensity exercise could have less positive effects on physiological and performance efficiency on soccer players. Therefore, based on aforementioned problems and methods for quantifying performance this study

was focused to see the physiological and endurance performance of soccer players; in relation with different exercise intensities.

2. METHODS AND MATERIALS

2.1 Subjects

The subjects of the study were healthy male varsity soccer players of Jimma University, Ethiopia, who took part in national higher governmental institutions sport festival. 20 purposively selected subjects were randomly and equally categorized in to high and moderate intensity exercise groups. Participants were free of risk factors associated with cardiovascular, pulmonary or metabolic disease, deemed safe to begin physical activity, and were not engaged in other regular training program.

2.2 Exercise and Warming-Up Protocol

The high intensity training group was performed high intensity (70% - 85% HR max) endurance training and the moderate intensity training group was also performed moderate intensity (50%-70% HR max) endurance training. The endurance training programs were long aerobic run, speed vo2 intervals, tempo run and strength efforts.

All participants performed a standardized warm up, followed by the exercise and testing protocol for Bruce Incremental Treadmill and Cooper 12 minute tests. The standardized warm up were include: dynamic movements in order to properly warm up the body before testing. Sub-maximal jumps, active and dynamic stretching, and dynamic motions emphasizing quadriceps and hamstrings as agonistic muscle groups are included in the sport specific warm up. All players experienced an identical warm-up protocol prior to testing procedures to limit the potentially confounding effect of using different warm-up procedures. All participants were asked to not participate in any physical activity 24 hours prior to testing.

2.3 Identification of Variables

The tested variables were illustrated in the below mentioned table.

No	Types of variables	Units	Instruments
1	Body Height	<i>M</i>	Digital scale
2	Body Weight	<i>Kg</i>	Digital balanced beam scale

3	BMI	Kg/m^2	Calculated
4	Resting Heart Rate	b/min	stop watch
5	Systolic blood pressure	$mmHg$	Sphygmomanometer
6	Diastolic blood pressure	$mmHg$	Sphygmomanometer
7	Bruce Inc. Treadmill	Min	Treadmill
8	Cooper 12 minute Run	$m \text{ in } 12min$	stop watch

2.4 Data Quality Control

To ensure the data quality, only standardized tests were used. And also to ensure general safety, calibrated materials and to minimize the mistake replication measurements were used by the researcher.

2.5 Ethical Issues

The study was designed in such way that ethical issues were properly addressed. Privacy of the participants and confidentiality were strictly observed and maintained throughout the study.

2.6 Methods of Data Analysis

Descriptive statistics in mean \pm SD were computed for body height, body weight, BMI, Resting Heart Rate, Blood Pressure, Bruce Incremental Treadmill and Cooper 12 minute. Multiple Variants tests were performed for Resting Heart Rate, Blood Pressure, Bruce Incremental Treadmill and Cooper 12 minute, to find out the significant difference of pre-test with post-tests. The percentile (%) was calculated to evaluate the changes of variables ($\% = \text{mean difference} \times 100 / \text{pre-test}$). The significance level was set at $P < 0.05$ for each statistical tests performed. The SPSS 20 software was used for the statistical analysis.

3. RESULTS

Table 1: Characteristics of the study subjects

Variables	HIG (mean \pm SD)	MIG (mean \pm SD)
Age (years)	22.1 \pm 0.73	23 \pm 1.24
Height (m)	1.78 \pm 0.04	1.74 \pm 0.06
Weight (Kg)	60.4 \pm 6.39	62.9 \pm 7.78
BMI (Kg/m^2)	18.71 \pm 1.33	20.45 \pm 1.32

The characteristics of the subjects are shown in Table 1. The mean age and height of participants was 22.1 and 1.78m in high intensity group (HIG) and 23 and 1.74m in moderate intensity group (MIG) respectively. The mean value of the participants weight in HIG was 60.40 kg and in MIG was 62.90 kg. Table 1 also showed that the mean BMI value in HIG was 18.7 kg/m² and in MIG were 20.4 kg/m² at the end of the study period.

Table 2: Mean effects of physiological and performance efficiency test of high intensity group of soccer players

Treatments	RHRb /min	Sbp mmHg	Dbp mmHg	Cooper M/12min	Bruce min
Pre-Test	60.90 ± 3.54	112.50 ±5.401	75.00 ± 5.27	2740 ±134.99	7.20 ±0.63
Post-Test	57.20 ± 3.29	105.00 ±4.08	66.00 ± 3.94	3320 ±257.33	9.40 ±0.84
Mean diff.	3.70*	7.50*	9.00*	580.00*	2.20*
Sig.	0.021	0.000	0.000	0.000	0.000

*Mean ± SD in the same columns in each parameter with different * superscripts are significantly different ($p < 0.05$), RHR (beat/min) = resting heart rate in beat per minute, Sbp (mmHg) = systolic blood pressure in millimeter mercury, Dbp (mmHg) = diastolic blood pressure in millimeter mercury, Cooper test in distance within 12 minute and Bruce incremental treadmill test in stage.*

Table 3: Mean effects of physiological and performance efficiency test of moderate intensity group of soccer players

Treatments	RHR b/min	Sbp mmHg	Dbp mmHg	Cooper M/12min	Bruce min
Pre-Test	62.00 ±2.82	113.00 ±4.83	77.00 ±4.83	2620 ±187.38	6.80 ±1.39
Post-Test	59.20 ±3.15	109.50 ±1.58	71.50 ±3.37	2860 ±250.33	8.00 ±1.33
Mean diff.	2.80*	3.50*	5.50*	240.00*	1.20
Sig.	0.050	0.032	0.012	0.025	0.058

Effects of high and moderate intensity exercise on physiological variables

Table 2 & 3 shows that the mean value of physiological and performance efficiency in high and moderate intensity group before and after intervention. The mean value of RHR in HIG was 60.90 b/min and 57.20b/min before and after intervention respectively and also in MIG were 62.00 b/min and 59.20 b/min before and after intervention respectively. The mean value of Blood Pressure in HIG was 112.50/75.00 mmHg and 105.00/66.00 mmHg before and after intervention respectively and also in MIG were 113.00/77.00 mmHg and 109.20/71.50 mmHg before and after intervention respectively.

Effects of high and moderate intensity exercise on performance variables

The mean values of performance efficiency in high and moderate intensity group before and after intervention also present in table 2, the mean value of cooper 12 minute run in HIG was 2740m and 3320m with in 12 minute before and after intervention respectively and also in MIG were 2620m and 2860m with in 12 minute before and after intervention respectively. The mean values of Bruce incremental treadmill test in HIG was 7.20 min and 9.40 min before and after intervention respectively and also in MIG were 6.80 min and 8.00 min before and after intervention respectively.

4. DISCUSSION

The more demanding the training, the greater the fitness benefits. Therefore, the researcher was interested in learning whether the effects of training on physiological and endurance capacity are dependent on the magnitude of energy release developed by different exercise intensities. To this study, the researcher compared two different training protocols: a moderate-intensity endurance training that is not supposed to depend on anaerobic metabolism and a high-intensity intermittent training that is supposed to recruit the anaerobic energy releasing system almost maximally.

Effects of high and moderate intensity exercise on physiological variables

In both groups the resting heart rate was reduced significantly after completing the intervention period, this is because of through him proved efficiency of peripheral muscles and higher stroke volume. The mean difference of RHR in high intensity group was decreased by 3.70 b/min (6.07%). However, the mean difference of RHR in moderate intensity group was decreased by 2.80 b/min (4.51%). This showed that, high intensity group was revealed better decrement in RHR. Recent studies (Wisløff, et al., 2009; Cornelissen, et al., 2010) showed that high-intensity aerobic exercise is associated with greater cardiac benefits than

exercise at low to moderate intensity. Whereas a journal (Hafstad, et al., 2011) showed that the effect of training especially on resting heart rate is greater at higher intensity the results of the present study confirmed a similar reduction of the resting heart rate in both high and moderate intensity training. Similarly, in a recent study found that exercise training of high intensity would be superior to moderate intensity (Eunhee, et al., 2012; Chase, et al., 2009) because it promotes beneficial cardiovascular adaptation (Chase, et al., 2009).

Blood pressure (Sbp (systolic blood pressure) and Dbp (diastolic blood pressure)) mean difference was decreased by 7.5 mmHg (6.66%) Sbp and 9 mmHg (12%) Dbp in high intensity group and also at moderate intensity group mean difference was decreased by 3.5 mmHg (3.09%) Sbp and 5.5 mmHg (7.14%) Dbp. This showed that, high intensity group was revealed better decrement in blood pressure. Up to date research output demonstrated that the superiority of high-intensity interval training for improving cardio respiratory fitness has important clinical implications because there is a strong association between low cardio respiratory fitness and incidence of hypertension (Myers, et al., 2002). Of all established risk factors, low cardio respiratory fitness seems to be the strongest predictor of mortality (Wisloff, et al., 2007). Increases in central O₂ delivery (cardiac output) and peripheral O₂ uptake (arterial and venous oxygen difference) contribute to training induced improvements in cardio respiratory fitness (Swain & Franklin, 2002).

Effects of high and moderate intensity exercise on performance variables

The mean difference value of Cooper test in high intensity and moderate intensity group was increased to 580m (21.16%) and 240m (9.16%) respectively. This result indicates that effective performance have been observed in high intensity group than moderate intensity group. Inconformity with this, Recent review of training studies have found that the higher the exercise intensity, the greater the increase in aerobic fitness (Wenger, 1986). If exercise of a more vigorous intensity elicits a greater increase in aerobic fitness than does moderate intensity exercise, perhaps more vigorous exercise has greater cardio protective benefits. Exercise of a vigorous intensity incurs greater energy expenditure (EE) than does exercise of a moderate intensity performed for the same duration. However, in Bruce incremental treadmill test no improvements have been observed.

5. CONCLUSIONS

Based on the results of 12 weeks intervention of different exercise intensities and the main findings in physiological and endurance performance; resting heart rate,

blood pressure (Systolic and Diastolic), and Cooper 12 minute run show a significant changes in both high intensity and moderate intensity exercise groups. Bruce incremental treadmill test has shown significant changes in high intensity group, but no improvement have been observed in moderate intensity exercise group. High intensity training has a great role for physiological (RHR, Sbp and Dbp) and endurance performance efficiencies of soccer players.

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STATUS, CHALLENGES AND PROSPECT OF YOUTH SPORT TRAINING CENTERS IN SOME SELECTED REGIONS IN ETHIOPIA

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ABSTRACT

The intent of this study is to assess the status, challenges and prospect of Ethiopian youth sport training centers in some selected regions. The research was made Oromia, South Nation Nationalities and People regional state, Dire Dawa and Addis Ababa as the sites of this study. Both qualitative and quantitative approaches particularly a descriptive survey were employed as they were found to be appropriate for answering the basic research questions. Pertaining to the sample size of population for the study (N=522) athletes, coaches, sport experts and Sport Administrators were participated. Concerning instruments of data gathering interview, questionnaire, focus group discussion and observation were be triangulated to enrich the validity of the tools. Data gathered by these instruments were organized in form table and frequency and percentage were used. The finding of study indicates that all athletes in the youth training centers were selected from sport competitions and there is no scientific methods of selecting sport talents in those sport training. Even though school and residence areas are special place for youth sport training for many Ethiopian youth currently sport playing ground around this area are used for different building construction. Scarcity of facilities, equipment and materials in the training centers also limit the performances of the centers. Furthermore sport organizations such national federations and sports clubs are not highly involving in youth sport training as the needs of the country. Therefore it is very important to follow scientific methods of talent identifications and development in order to produces outstanding athletes and sport commissions ,sport federations ,sport clubs and all stake holders should work together to establish new youth training policies structures and development in all parts of the country.

Keyword: Youth sport training status, challenge, prospect.

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1. INTRODUCTION

Recently sport have been recognized as a powerful means to promote education, health, culture sustainable development and peace by many organizations including the International Olympic Committee (IOC) and United Nations Office of sport for Development and peace Numerous policy papers claim that sport contributed to society in terms of social inclusion and development of social capital for example, interview paper, Bailey (2005) identified the five areas of physical health, cognitive and academic development, mental health, crime reduction of truancy and distention as area where sport makes contributes to society.

Sports can contribute to the development of personal and social values that very important in the educational process of the child and youngster. These included commitment, perseverance, personal responsibilities within the group, team work, respecting the rules, respecting others and learning to compete (Maurizo, 2000). Apart from the values already mentioned above, sport can help young future adults to acquire psychological resource such as cognitive development self –controls , self- esteem and self- confidence that can be very useful not only in sports but also in their life in general.

Thus, rapidly increasing popularity of sport has created a high demand for further expansion and development. Currently they are many youth sport training centers in Ethiopia .these youth sport training centers found almost in all regions. However, the majorities of centers found in Oromai, South Nation Nationalities and peoples, Addis Ababa and Dire Dawa city administrations .

These sport centers encompass different sport events including athletics, basketball, football, handball and others. however currently there are only three sport events (athletics, basketball and football) in which the trainings are undergoing in different age categories as a result of popularity of these events while the other are getting weaken from time to time. Sport could be developed and expand further when government, administrator's police makers, scholars, & others stake holders work jointly .however there are huge gap between these stake holders .this includes absence of well organized sport strategies and polices ,shortage of sport infrastructure such as sport courts and track, lack of sport materials and equipment, absence of scientific training procedures and talent detection methods .in addition there are shortage of well trained man power and weak administration and supervision. Furthermore there is no sufficient research finding in the area of youth sport training centers in Ethiopia particularly in these four regions (Oromia, South Nation Nationalities and Peoples, Addis Ababa and Dire Dawa City administrations).

However in the absence of sufficient research findings in the area of youth sport training development in Ethiopia efforts will made to assess, current

status, challenges and future prospective youth sport training centers. Therefore this investigation will play very crucial role in creating awareness about youth sport training centers in Ethiopia. In this endeavor attempts were made to briefly consider the theoretical and practical conception to examine the challenges of youth sport training in Ethiopia. It's also expected that this study will provided valuable support in youth sport training in Ethiopia for further investigations and studies.

2. METHODS AND MATERIALS

2.1 Research Design

The nature of the data generated to undertake this study lends itself to both qualitative and quantitative approaches particularly to cross-sectional study design. The researcher employed descriptive survey as his method of the study because it provided the research with detailed description of existing conditions about the problem under investigation.

2.2 The Research Context

As regards the research context, the researcher chosen federal Democratic Republics of Ethiopia and thus four Regions namely Oromia, South Nation Nationalities and People, Addis Ababa and Dire Dawa city administration will include in the study. These four areas were selected based on their high numbers of youth sport training centers and contributions of athletes for Ethiopian national team particularly in these three events (athletics, basketball and football).

2.3 Population of the Study

The research population included a range of respondents, namely four regions (Oromia, South Nations Nationalities and Peoples, Dire Dawa and Addis Ababa City Administration youth training centers athletes, coaches, federal and regional sport Administrators and sport experts from respected centers and some higher institution.

2.4 Sampling Techniques

In order to select sample from the target population, the researcher were used two sampling strategies the first strategies is random sampling techniques. This used to select number of athletes. The athletes were selected based their participation on regional and national sport competitions and festival. The second sampling

techniques were availability sampling methods for coaches, sport administrator and sport experts' accordingly.

2.5 Data Gathering Instruments

There is deep conviction that there is merit in using more than one instrument as they supplement each other to general credible data accordingly, the researcher employed questionnaires interview, focus group discussion and observation as tools of requisite information procurement.

2.5.1 Questionnaire

Questionnaires with closed ended and open-end items were developed for both athletes and coaches. The questionnaires were raised different questions concerning youth sport training, particularly about current status, major challenges, problems and future of these centers.

2.5.2 Interview

To supplement information procured through questionnaires the researcher adopted a semi-structural interview. Semi-structured interview were held with federal and Regional sport administrators or leaders.

2.5.3 Focus Group Discussion

Focus group discussions were held with expert and scholars of sport science on the issues of youth sport training principles and procedures with reference to scientific approaches. In addition this document that supposed to provide the necessary information about: training manuals, policies strategy, plan, budget, result, profile, rank of trained manpower were discussed with those experts and scholars.

2.5.4 Observation

Observations were focus on sport infrastructures, facilities and equipments that related youth sport training centers. Observation check list was prepared to increase the reliability of the data and conducted for three days each in all selected training centers.

2.6 Validation of Instruments

To ensure the validity of the instruments questioners and interview will prepared in three languages namely English Amharic and Afan Oromo, this is because language diversity of participant particularly athletes. In addition the researcher was invited language experts for their comments and criticism. Based on the feedback obtained from experts some improvement and modification was made.

Furthermore, this four data gathering tools, namely, questionnaire interview focus group discussion & observation will be triangulated for the purpose of enhancing the validity & verification of data generated.

2.7 Procedures of Data Gathering

Indoor to obtain valid data from research participants the investigator was used three assistant data collectors with qualification of MSc (one person) and BSc (two persons) degree holders.

3. RESULTS & DISCUSSION

According to response of athletes' all athletes (100%) were selected to join sport training centers through competitions. No single athlete joins the training center through talent identification process. The response from coaches and sport scholars also strengthen this point since there are no trends to select sport talents from childhood like the experience of other country. Even, the new established Ethiopian youth sport academy also still following the old methods of selecting athletes for training in different categories.

This indicates that those athletes who cannot get chance of competitions could miss the chance to join the youth training centers.

As noted from respondent athletes 155(43.6%) of the athletes are involved in sport activities begin to involved residence area while 200(56.4%) of them start playing sport in school. This shows that both residence and school areas play important roles for talent identifications & decadent of the athletes.

Concerning youth sports training centers absolute majority of the athletes response are not satisfy with facilities and comfortable of youth sport training since 250(70%) strongly disagree, 100(28%) disagree and only 5(2%) agree. From the observation of youth sport centers in some parts of Ethiopia it's noticed the almost all of training centers are not comfortable and well equipped in all appropriate materials and facilities. 190 (52%) strongly disagree, 150(42%) disagree and only 15(5%) agree on the availability of materials and equipment. Athletes also asked about the security and safety training centers and responds 100(28%) strongly disagree and 205(72%) disagree. According the interview response of sport administers in some youth sport training centers some problem were existed this includes unnecessary pregnancies of youth athletes in few

centers and difficulty of continuous supervision. Shortage budget, scarcity of materials and facilities.

From response of, coaches, sport administrators and scholars of sport science concerning the youth sports training centers some challenges were identified. one of these challenge is shortage sport fields in residence and schools areas in the previous one they are a lot open field that were used as playing grounds of different sport events for many youths and adults. However these areas are now changed to different construction. According to information of sport administers in the capital city of the country more 40 open sport play grounds are now changed to building constructions the same is true for other town and village throughout the nation. The second challenges raised by participants of study were the curriculum of sport science in the primary and secondary school .according to some expert of sport science the curriculum primary and secondary school also influence the involvement of students in sport activities since there is only single period for primary and secondary school and the school the special place to find sport talents as experience of other countries. The third issues of where the structures and organization of Ethiopian sports institutions, sport academy and national sport organization like federation, sports clubs and sport associations are not function as expected.

4. CONCLUSIONS

According to the finding of this study the following conclusion are drawn:

- All athletes of youth sport training centers selected from different sport competitions and there is no scientific sport talent identification development practice the country. Therefore athletes who have sport talents but did not get competitions opportunity will miss out.
- Absolute majority of athletes begin their sport career at residence and school however huge scarcity of sport infrastructures and facilities are occurred. Since many local sports playing ground and fields are changed to construction of different building in both schools and residence area.
- Only one sport academy there for eighty millions for population. This academy also train few athletes for short period of time and other youth sport centers is not equipped all necessary personal, materials and facilities as need of the country.
- Structures of National sport organization such sport federation and sport clubs are not highly involved in youth sport talent identification and development of athletes with various sport events and categories.

- The training methods and principle in most of youth sport training centers are more old traditional methods only limited training centers are practice scientific and up-to-date training.

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COMPARATIVE STUDY ON LOWER ARM LENGTH OF ATHLETES AT DIFFERENT LEVEL OF COMPETITION

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ABSTRACT

The main purpose of the present study was to compare lower arm length of among the all India intervarsity, national and state level long distance runners. The study consisted of 227 all India intervarsity, 131 national and 42 state long distance runners from different levels of competition. The age group ranged from 18 to 25 years. Measurements included the lower arm length of all athletes. For measuring the lower arm length, the measuring tape was used. It was found that there is a significant difference between the mean lower arm length of all India intervarsity and national level long distance runners. Whereas there is no difference exists between national and state level long distance runners and also between all India intervarsity and state level long distance runners.

Keywords: Lower arm length, long distance runners, cardio respiratory endurance.

1. INTRODUCTION

Running events which are longer than 3000 meters is considered as long distance running event. The most common of these races are 5000 and 10000 meters. The marathon race is one of the examples of long distance race, which take place on paved roads over a course of 42.195 km (26 mile and 385 yard). Most of the best distance runners are small and light-framed (Jayakumar, Rameshkanan, & Chittibabu, 2013). They use a running style that avoids excess motion. Knee action is slight, arm movements are reduced to a minimum and the strides are shorter than those used in sprinting or middle-distance running. Along with fitness, strategy is also very essential for competing in long distance events. The

top racers use a variety of techniques to outperform their opponents, from abrupt changes of pace during the race to fast finishing kicks.

Kinanthropometry helps and improve the understanding of the gross functioning of the human body by measurement of body's size, shape, proportions and composition and relating these to health, exercise and performance. The central interest of kinanthropometry is that of physical performance, in particular, though not limited to, sport performance (Mohammad, 2015). By examining the relationship between body measurements and aspects of performance, kinanthropometry helps in optimizing training to improve performance, and also helps to reduce injuries (Koley, & Kaur, 2011; Brunkhorst, & Kielstein, 2013; Hussain, Ahmed, Mohammad, & Ali, 2013). Thus, measurement plays an important role to reaching the peak level of performance to long distance runners. The measure anthropometrical traits are as, tall height, lighter in weight and lower the center of gravity provides the maximum level of perfection in the running events. Measurement of body size includes such descriptive information as height, weight and surface area. While measures of body proportions describe the relationship between the height and weight among lengths, widths and circumference of various body segments. Jalliffe (1966) defined the measurement of the variation of physical dimension and grass composition of the human body at different age levels and degrees of nutrition. Eiben (1981) studied the importance female athletes, size, and shape and body composition and reported that female sprinters were smaller in stature than female hurdlers, jumpers and throwers. Chauhan, (1986) studied relationship between selected anthropometric variable and endurance running performance. He concluded that height, leg length, thigh length, total arm length, shoulder, chest, abdomen, hip and knee girths, thigh and calf skin folds and lean body mass had significant and negative correlation with 1500 m endurance running performance, where as 10,000 m running performance had statistically insignificant correlation with linear segment, girth and diameter measurements except with skin fold measurement (triceps, suprailiac, midaxiliry, thigh and calf skin-fold) and body composition variables (i.e. body density, fat percentage, fat weight and lean body mass). Multiple correlations of 1500 meters running performance with combination of selected anthropometric variable were significant. Similarly the multiple correlation of 10,000 meters running performance with combination of selected skin fold and body composition variables were significant. But the multiple correlations were not sufficient size to put them in to the prediction equation.

Thus physical characteristics play a very vital role in all games and sports whether it is team or individual game, ideal body segments as per the demand of the particular event is necessary for higher achievement in that particular sport. Earlier studies reported that body height, body mass, palm span and palm length were important for the performance enhancement of athletes and were considered as basic criterion for their selection in various playing positions (Srroj 2002; Taborsky 2007). Skoufas (2003) reported that wider palm span and longer palm length influenced specific motor abilities.

2. METHODS AND MATERIALS

2.1 Subjects

For the purpose of this study three sample groups were formed. 1st group comprises of 227 All India Intervarsity Long Distance Runners, 2nd group comprises of 131 National Long Distance Runners and 3rd group comprises of 42 State Long Distance Runners were selected from different level of competition. They are in the age group of 18 to 25 years.

2.2 Procedure

The subject was made to stand with arms hanging down normally. Radial and dactylion were marked on the right hand. The distance between these two points was measured with the help of a measuring tape and the value was taken.

2.3 Statistical Analysis

One way analysis of variance was used to test whether there is any significant difference among the chosen lower arm length variable of long distance runners at different level of competition.

3. RESULTS

Table 1: Lower arm length of different level long distance runners

Source of Variation	df	Sum of Squares	Mean Square	F
Treatment	2	15.79	7.89	6.15*
Error	397	509.54	1.28	
Total	399	525.33		

*Significant at .05 level

Tab.F._{.05} (2,397) = 3.02

It is observable from the Table 1 regarding the lower arm length of the different level long distance runners. Calculated value of F (6.15) is more than the tabled value of F (3.02). So it can be conjectured that there is a significant difference in the mean lower arm length of different level long distance runners. Further to find out which level is greater than the other scheffé's test was applied, the analysis is related to this is given in Table 2.

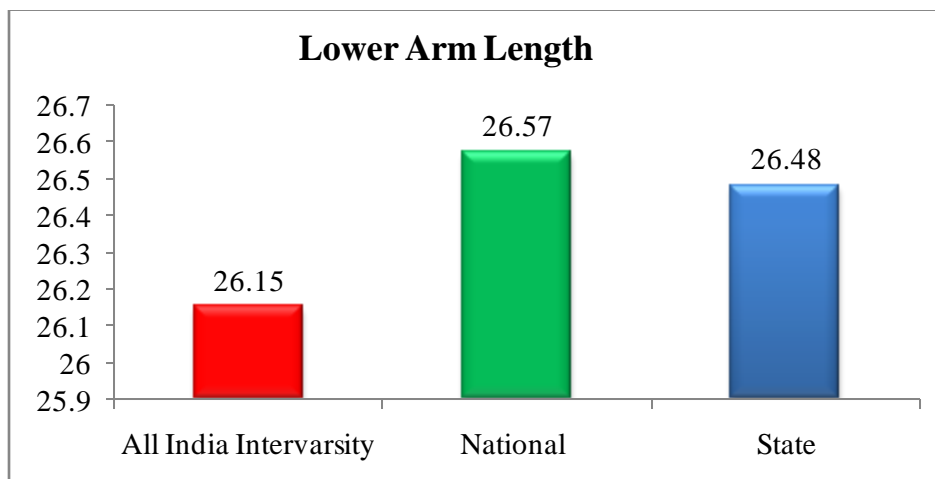
Table 2: Comparison of lower arm length of different level long distance runners

All India Intervarsity	Level		Mean Difference	Critical Difference
	National	State		
26.15	26.57		0.42*	0.30
26.15		26.48	0.33	0.49
	26.57	26.48	0.09	0.46

*Significant at .05 level

In Table 2 comparison of lower arm length of different level long distance runner's pair wise mean difference with the critical difference is shown. It is evident from the readings that there is a significant difference between the mean lower arm lengths of all India intervarsity and national level. Whereas there is a no significant difference between national and state level and also between all India intervarsity and state level long distance runners.

Figure 1: Mean lower arm length (cm) of different level long distance runners



4. DISCUSSION

From the results it is evident that there is significant difference amongst all three groups on the variable of lower arm length of long distance runners. It is further found that there is significant difference amongst the mean lower arm lengths of all India intervarsity and national levels long distance runners. Whereas there was no significant difference between national and state level and also between all India intervarsity and state level long distance runners. There is height very important role in lower arm length. For height is similar of national and state level and all India intervarsity and state level long distance runners.

Greater lower arm length of long distance runners' provides greater range of movement and momentum, which favors in maintaining their speed. As the distance of race increases, the requirement of maintaining running movement for longer time also increases. Therefore, all India intervarsity and state long distance running athletes had to compromise for speed and power. So, they avoid wider movement of lower arm to save the energy for prolonged period of running time (Singh, & Khan, 2013). Thus with increase in the level of participation of long distance runners, the arm length increases. Mohammad (2015) also documented in his study performance is highly correlated with the arm length of the athlete. In this study same sort of results are reported. Ali and Mohammad (2012) in their study stated that as length of the arm increases the strength also increase simultaneously. So for good results coaches and players should work on this factor. Cureton (1941) stated that in general, people with long legs and long arms and relatively short and small trunks were physically weak in long sustained heavy work, but they might show great speed and endurance at high levels of athletics activity. Long third-class levers are noted for speed and range of action as well as for their efficiency for force. The coaches should trainee who has wider arm.

5. CONCLUSIONS

Based on the results it is concluded that there is significant difference amongst all three groups on the variable of lower arm length of long distance runners. It is further found that there is significant difference amongst the mean lower arm lengths of all India intervarsity and national levels long distance runners. Whereas there was no significant difference between national and state level and also between all India intervarsity and state level long distance runners.

On the nutshell, it is documented that arm length influence the performance of the athletes, thus the coaches should design a training programme for the proper development of the arm length or they can find a trainee who has wider arm.

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RELATIONSHIP OF EGO-STRENGTH WITH THE PERFORMANCE IN CONTACT AND NON-CONTACT SPORTS

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ABSTRACT

The purpose of the study was to investigate the relationship of ego-strength with the performance in contact and non-contact sports. Four hundred forty eight subjects were selected from contact and non-contact sports. Their age ranged from 18 to 25 years. To determine the performance of the contact and non-contact sportsmen, subjective judgment was made with the help of three judges. The Ego-Strength Questionnaire framed by Barron, were administered to find out the relationship of ego-strength with the performance in contact and non-contact sports. Pearson's Moment Correlation was used for data analysis. The analysis of data reveals a significant relationship of ego-strength with the performance in contact sports whereas in non-contact sports ego-strength did not show any significant relationship with the performance.

Keyword: Ego-strength, performance, contact sports, non-contact sports.

1. INTRODUCTION

The core of ego orientation is that the students in the learning situation are preoccupied with themselves and how others perceive them, that judgment of ability is normatively referenced, and that the students are concerned with social comparisons. Skaalvik (1997) argued that this orientation might lead to different goals for different students. They claimed that, for some ego-oriented students, the goal might be to be best or to demonstrate superior ability, which is the typical understanding of the concept. For other students, ego orientation may result in trying not to be poorest, to avoid looking stupid, or to avoid negative reactions from other.

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Kavussanu and Ntoumanis (2003) in their study found that the contact sports positively predicted ego orientation, which in turn predicted low levels of moral functioning. The direct effects of sport participation on moral functioning became no significant in the presence of ego orientation indicating that the latter construct mediates the relationship between the first two variables (Stucke, & Baumeister, 2006). Task orientation corresponded to high level of moral functioning. These findings help us further understand the processes operating in contact sports and are discussed in terms of their implications for eliminating unsportsmanlike conduct from the sport context.

Meyer (2000) found that the Rorschach Prognostic Rating Scale (RPRS) had a strong ability to predict subsequent outcome. However, that review did not directly address questions of incremental validity. This article focuses on the ability of the RPRS to predict outcome after taking into account other sources of data. Across studies that examined both the RPRS and the MMPI Ego Strength scale, the RPRS had a strong ability to predict outcome, whereas the MMPI scale did not. Nine studies examined the RPRS along with an intelligence test and allowed direct numerical estimates of incremental validity to be calculated. Across studies, the RPRS demonstrated strong incremental validity after controlling for intelligence (incremental). It is clear that the Rorschach can make unique contributions to understanding clinically relevant processes in ways that self-reports or measured intelligence cannot. Contemporary Rorschach scales should continue to be evaluated for their distinctive and incremental contribution to clinical practice.

Further much of the information collected by the social psychologists related to ego strength has not been transmitted to coaches and to team sports (Baumeister, Bratslavsky, Muraven, & Tice, 1998). Therefore the investigator, in this study has directed this attention towards an understanding of the relationship of Ego-Strength with the performance in contact and non-contact sports.

2. METHODS AND MATERIALS

2.1 Subjects

Four hundred forty eight (448) male subjects were selected from contact and non-contact sports for this study. Their age ranged from 18 to 25 years. These subjects belonged to All India Inter-University first four position holders and for relay events (Swimming and Track & Field) that finished in first eight positions.

The scholar chose 224 male subjects from Hockey, Football, Basketball and Handball as contact sports. In the same way the scholar chose 224 male subjects from Cricket, Volleyball, Track & Field (relay events) and Swimming (relay events) as non-contact sports.

2.2 Collection of Data

The data pertaining to Ego-Strength data was collected by administrating “Ego-Strength Scale” developed by Sprock and Bienek, (1998). The data was collected on 448 All India Inter-University men players belonging to contact sports (Hockey, Football, Basketball, and Handball) and non-contact sports (Cricket, Volleyball, Track & field relay events and Swimming relay events). Before administrating the questionnaire the purpose of the study was explained to the subjects and the researcher solicited their co-operation which all of them readily agreed to extend. The questionnaire was administered one day before the tournaments.

2.3 Assessment of the Performance

To determine the performance of the contact and non-contact sportsmen, subjective judgment was made with the help of three judges from coach/trainer of the particular team and other experts.

2.4 Statistical Technique

Pearson Product Moment Correlation Coefficient was used to find out the relationship of ego-strength with the performance in contact and non-contact sports. The level of significance was set at 0.5 level of confidence.

3. RESULTS

Table 1: Relationship between ego-strength with the performance in contact and non-contact sports

S.No.	Variable Correlated	Team	<i>r</i>
1.	Ego-Strength and Performance	Contact	0.16*
2.	Ego-Strength and Performance	Non-Contact	-0.09

*Significant Tab $r_{0.05(222)}=0.13$

Table 1 indicates that the relationship between ego-strength and performance in contact sports as the obtained value of r (0.16) is high as compared to the tabulated value of correlation r (0.13). The above mentioned value indicates that there is a significant relation between ego-strength and performance in contact sports. It is revealed from the table 1, which indicate that the relationship between

ego-strength and performance in non-contact sports as the obtained value of r (0.09) is low as compared to tabulated value of correlation r (0.13). The above mentioned value indicates that ego-strength has no significant relationship with performance in non-contact sports.

4. DISCUSSION

The analysis of data reveals the significant relationship of ego-strength with the performance in contact sports. However, in the case of non-contact sports analysis of data shows insignificant relationship of ego-strength with the performance. It means that Ego-Strength is positively related to the performance in contact sports. It shows that performance of contact sports mostly depends upon the ego-strength of the players which means if the players know each other very well, understand each other, have full self confidence, with the ego feeling to achieve the goal and try whole heartedly towards the common goal of the team, they will definitely improve their performance as individual players as well as that of the team as a whole (Alberts, Martijn, Greb, Merckelbach, & de Vries, 2007).

Results revealed that Ego-strength does not show a positive relationship with the performance in non-contact sports. It means ego-strength does not affect the performance of the non-contact sports. So it is clear from the results of this study that if the players collectively try to achieve the aim with the positive self-esteem, mutual understanding, self-confidence, and self-possession, they will definitely improve the performance of the team (Vohs, Baumeister, Schmeichel, Twenge, Nelson, & Tice, 2008).

5. CONCLUSIONS

On the basis of the results of the present study, significant relationship was found ego-strength with the performance in contact sports, while in non-contact sports did not show any significant relationship with the performance. This indicate if the players know each other, understand each other, have full self-confidence, without the ego feeling to achieve the goal and try whole heartedly towards the common goal of the team, this will definitely improve their performance as individual players as well as the team.

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EFFECT OF EXTRAVERSION AND SPORTS PARTICIPATION ON EMOTIONAL INTELLIGENCE OF FEMALE PLAYERS & NON-PLAYERS

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ABSTRACT

The purpose of the study was to analyze the effect of extraversion & participation in sports on emotional intelligence of female players & non players. The study was conducted on 200 female in which 100 players & 100 non players were selected as a sample. All the selected female players represented in at least intervarsity level tournament. The age of the sample ranged from 18-25 years and all the samples selected from random basis. Extraversion was assessed by Hindi version of Junior Eysenck Personality Inventory (J.E.P.I.) prepared by Menon (1978) was used, while emotional intelligence of the subjects was assessed by emotional intelligence inventory prepared by Mangal & Mangal (1995) was adopted. To find the effect of the Extraversion & sports participation on emotional intelligence 2x2 ANOVA techniques was adopted. Results indicated that extraversion & sports participation showed their main effect upon emotional intelligence of selected subjects. The joint effect of extraversion & participation in sports on emotional intelligence was found to be statistically insignificant.

Keywords: *Extraversion, introversion, emotional intelligence.*

1. INTRODUCTION

The idea that people differ in emotional intelligence (EI) has prospered because of a number of converging factors, including contemporary cultural trends and orientations (Paul, 2015). To begin with, EI has been the target of widespread interest owing to the increasing personal importance attributed to emotion management for people in modern society. It is believed that EI can be trained and improved in various social contexts (educational, occupational, and

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interpersonal) and that personal and societal benefits will follow from investment in programs to increase EI. There is currently a growing impetus towards the provision of personal, educational, and workplace interventions that purport to increase EI. Furthermore, EI has been commonly claimed to play an important role in modern society by determining real-life outcomes above and beyond the contribution of general intellectual ability and personality factors (Goleman, 1998). Thus, EI is claimed to be positively related to academic achievement, occupational success and satisfaction, and emotional health and adjustment (Ilyasi, & Salehian, 2011). EI, in fact, has been claimed to be even more important than intellectual intelligence in achieving success in life (Goleman, 1998).

A subtext in the claimed importance of EI to success in modern society is that the benefits of general (cognitive) intelligence are overstated, and emotional intelligence may often be more important than conventional IQ. Accordingly, EQ has become fashionable in part because it seems to reduce the predominance and importance typically accorded to intellectual intelligence. A possible related factor underlying the popularity of the EI construct is antagonism (warranted or unwarranted) toward the concept of intellectual intelligence and its measurement.

Jaipal and Kumar, (2013) identified three basic classes of measurement techniques. These are (1) rating scales, (2) unstructured projective tests, and (3) questionnaires. Rating Scales Characteristically, rating scales involve the use of a judge or judges who are asked to observe an individual in some situation.

Typically, two types of situations are involved in personality assessment using rating scales (Sternberg, 2000). These are the interview and the observation of performance. In the interview, the judge asks the subject numerous open-ended and specific questions designed to ascertain personality traits and general impressions. If the interview is conducted properly, carefully, and systematically, the results can be reliable and valid.

Psychological researches based on the sports have been interested in how athletes' psychological and characteristics influence performance. On the basis of this point, it is clear that psychological characteristics differ between more and less effective athletes and teams. Moreover, the ability to mentally prepare is considered a key component of such differences (Brewer, 2009). The significance of personality characteristics as a predictor for sports performance has been recognized in psychology (Sternberg, 2000). Researchers have recently reported the significant effects of personality on sports performance (Aidman, & Schofield, 2004). When athletes participate in competitive sport, their underlying personality characteristics inevitably contribute to how they behave. Personality has been defined as "psychological qualities that contribute to an individual's enduring and distinctive patterns of feeling, thinking and behaving" (Cervone, & Pervin, 2010).

Few studies have specifically examined the role of the psychological factors in predicting sports performance. Studies have also indicated a positive relationship between conscientiousness and job performance (Paul, 2015). Very few contemporary researches have explored the effects of extraversion and sports participation on emotional intelligence of female players and non-players. This research attempted to explore the influence of extraversion and sports participation on emotional intelligence of female players and non-players. The purpose of was to examine the relationship between extraversion and sports participation on emotional intelligence of female players and non-players.

2. METHODS AND MATERIALS

2.1 Subjects

For this 200 female subjects in which 100 players & 100 non players were selected from different colleges of Himachal Pradesh. The selected female players at least represented intervarsity level tournaments, while the non players had not played any games. The average age of the selected sample was 21.5 years.

2.2 Procedure

To measure extraversion dimensions, Hindi version of Junior Eysenck Personality Inventory (JEPI) prepared by Menon (1978) was used. Scoring was done according to rules laid down by the authors. After scoring, obtained data was tabulated. To assess emotional intelligence of selected subject's emotional intelligence inventory prepared by Mangal & Mangal (1995) was used. This inventory is highly reliable & valid.

2.3 Statistical Analysis

To find the effect of extraversion and participation in sports on emotional intelligence of female players and non player's 2x2 ANOVA techniques was used.

3. RESULTS & DISCUSSION

Descriptive statistics and ANOVA summary are presented preceding tables.

Table 1: Extraversion-introversion (A) x participation in sports (B) on emotional intelligence of female subjects (n=143)

		Participation in Sports (B)		M
		B1 Female Players	B2 Female Non- players	
Extraversion	A1	M=65.10	M=60.16	62.63
	Extrovert	N=30	N=49	
	A2	M=62.94	M=56.77	59.86
	Introvert	N=37	N=27	
	M	64.02	58.47	

Table 2: ANOVA summary of effect of extraversion-introversion (A) x participation in sports (B) on emotional intelligence of female subjects (n=143)

Source of Variance	SS	df	MS	F
A	260.48	1	260.48	1.66
B	1046.80	1	1046.80	6.70*
AB	12.87	1	12.87	0.08
Within treatment (Error)	21695.95	139	156.08	

*Significant at 0.05 level

From table 1, results indicated that the main effect of extraversion upon emotional intelligence of female subjects is statistically insignificant. Thus it can be said that the main effect of extraversion as an independent variables have not influenced emotional intelligence of female subjects. The F of 6.70 is statistically significant beyond 0.05 levels; it thereby indicates that have the main effect of participation in sports upon emotional intelligence of female subjects is also statistically significant. Hence it can be said that with greater confidence that female players exhibited significantly better emotional intelligence compared to female non-players. Table 1 also documented that the F 0.08 is statistically insignificant. Hence it was found that the joint effect of extraversion and participation in sports also statistically insignificant.

4. CONCLUSIONS

On the basis of obtained results following conclusions can be made:

- The main effect of extraversion upon emotional intelligence of female players and non players was observed to be insignificant.

- The main effect of participation in sports upon emotional intelligence of female subjects is also statistically significant. Hence it can be said that with greater confidence that female players exhibited significantly better emotional intelligence compared to female non players.
- The joint effect of extraversion & participation in sports on emotional intelligence was found to be statistically insignificant.

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EFFECTIVENESS OF PRESENTATION TEACHING & CO-OPERATIVE LEARNING METHODS ON ASANA PERFORMANCE IN YOGA

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ABSTRACT

The purpose of this study was to examine the effectiveness of presentation teaching method (PTM) & co-operative learning method (CLM) on asana performance in yoga. It is pre-test- post-test non-equivalent quasi-experimental groups design, in which 30 girl students of 8th standard was purposively selected as sample from Modern High school, Ganeshkhind, Pune. They were divided into two groups. First experimental group (n=15) assigned by PTM & second experimental group (n=15) by CLM. Asana performance test was conducted in the beginning & after implementation of 12 weeks teaching program as a pre-test & post-test. Obtained data by asana evaluation sheet, were analyzed using mean, standard deviation, Paired sample 't' test & Independent 't' test. Results show that both the teaching methods are useful to improve asana performance. It was further concluded that CLM group asana score ($M=23.80 \pm 4.66$) was superior to PTM group score ($M=11.60 \pm 4.86$), where 't' value was 7.01 which is statistically significant at 0.005 significant level ($p=0.001$).

Keywords: Presentation teaching method, co-operative learning method, asana performance.

1. INTRODUCTION

Nature transforms every bud into a beautiful flower through several steps involving natural process. Likewise, all children are flower buds when they enter a school for the first time. It is the role of school teacher who are involved in blooming them into colorful flowers; with sweet fragrance which is knowledge. School teacher are considered as a superior power of nature who takes the children from ignorance to intelligence. What a child learns & experiences during

his early school years is the results of his learning & the teaching behavior of the teacher (Sidentop, 1991).

When teaching take place a special human connection evolves, a connection of many dimensions that simultaneously affects the learner & the teacher. Teaching is the ability to be aware of & utilize the possible connections with the learner in all domains. The teaching process is a continuous interaction between the behaviors of the teacher and behaviors of the learners (Ashworth, & Mosston, 1994).

The basic task of teaching is to help students to learn. Sometimes students don't know what they are learning & what the teacher is teaching. Also sometimes teacher himself doesn't now what they are teaching.

So there need to be good or effective teaching. Means physical educators need to be effective or good teachers and good teachers know what to teach, how to teach and understand the need of their pupils. In addition, they are able to communicate effectively, can plan for and organize classes efficiently and have a deep commitment to the optimal development of the pupil. For successful teaching, teacher has to know their subjects thoroughly, is enables them to develop their subjects in way that are engaging, learning, participation & achievement (Show & Kaushik, 2009).

Actually by teaching of learning procedure has been guided by the following terms: Teaching tool, Teaching methods, Teaching strategies, Teaching techniques (Ashworth, & Mosston, 1994).

According to the Singh "The system used by the teacher for achieving the goal is called the method of teaching". As per the role-played by the teacher & student in teaching-process, teaching method was categorized in teacher-centered & student-centered methods.

In teacher-centered methods, teachers play the dominant role in teaching the skill. In this method teacher is active & the student is physically passive but mentally receptive. It is also called traditional methods. In physical education when we come across the teacher-centered methods like presentation method (demonstration, explanation & lecture), lecture method, whole method, part method, whole-part-whole method, command method, set drill method, progressive part method etc. are dominantly used. in student centered methods, students take the total decision about their learning, like at-will-method, co-operative method, reciprocal method, problem-solving method, etc (Bucher, & Koenig, 1974; Graham, 2008). There are also some methods like task/project method, circuit method, group directed practice method, discussion method, guided discovery method etc. In which teacher & learners both, play equal role in teaching-learning process (Jyoce, & Weil, 1997; Karandikar, 1997). Ashworth and Mosston, (1994), arranged these styles according to the role dominance of the teacher & the students & called them as spectrum of teaching method (Schmidt,

1988; Show & Kaushik, 2009). Out of above mentioned teaching method the researcher used presentation teaching (demonstration) and co-operative learning method (STAD) in this study, to see the effectiveness of these two methods on asana performance in yoga.

2. METHODS AND MATERIALS

2.1 Subjects

In the present study, 30 students (girls) of the 8th std ('A' division) of Modern High school was selected, for Presentation Teaching method (PTM) and Co-operative Learning Method (CLM) program. These individuals were purposively separated into two experimental groups. Each group followed a different teaching method for the learning of basic asana in yoga. After pre-test, twelve weeks of PTM and CLM teaching program was administered on the selected samples. On completion of this program a post-test was conducted.

2.2 Teaching Program

The sample participated in PTM and CLM method program for 12 weeks (6days per week). The program was designed to improve the asana performance in yoga. In which two different methods (PTM & CLM) used. Each session workout was as follows: prayer, om-chanting, suryanamskar and basic level of asana (standing, sitting and lying asana).

2.3 Statistical Analysis

In the present study, the independent variable was the presentation teaching method and co-operative learning method program. The dependent variable was the asana performance. Results for all variables were presented as descriptive statistics, mean, standard deviation and standard error. This mean difference and change in performance was tested by paired sample 't' test and independent 't' test respectively.

3. RESULTS

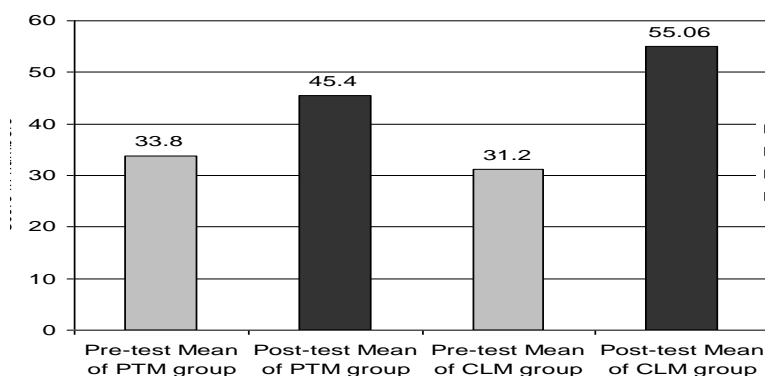
Asana performance were measured at previous (before) and after implementation of the PTM and CLM program. The results of evaluation showed significant improvement in asana performance.

Table 1: Asana performance of pre-test (PRE) & post-test (POST) of PTM & CLM program using $X \pm SD$

Variable	N	$X \pm SD$		<i>t</i> value	Correlation
		PRE	POST		
PTM	15	33.80 \pm 4.09	45.40 \pm 4.89	9.23*	0.42
CLM	15	31.27 \pm 3.77	55.07 \pm 2.60	19.67*	0.03

*Significance at 0.05 level of significance

Figure 1: Mean of asana performance test of PTM & CLM group

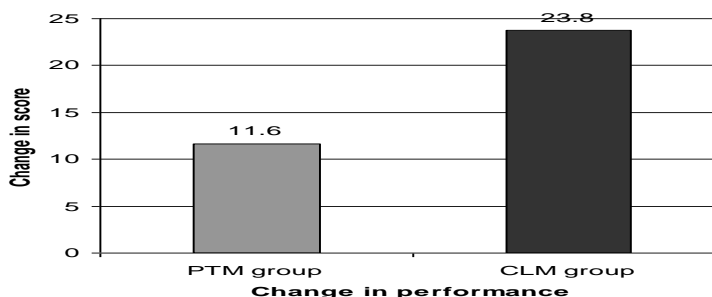


In Table 1 & Figure 1, mean performance of 30 subjects in the pre-test and post-test of PTM and CLM group in asana was 33.80 (± 4.09), 45.40 (± 4.89) and 31.27(± 3.77), 55.07(± 2.60) respectively. Coefficient of Correlation between pre-test and post-test of PTM group was 0.42 which was statistically not significant at 0.05 significant levels ($p= 0.11$), & Coefficient of Correlation between pre-test & post-test of CLM group was 0.038 which was also not statistically significant at 0.05 significant level ($p= 0.89$). The mean difference between pre-test & post-test of the PTM group was 11.60 (± 4.86). This mean difference was tested by paired samples *t*-test, where *t* value was 9.23 at degree of freedom 14 shows statistically significant difference at 0.05 significance level ($p=0.001$) and the mean difference between pre-test and post-test of the CLM group was 23.80 (± 4.66) and calculated *t* value was 19.76 at degree of freedom 14 shows statistically significant difference at 0.05 significance level ($p=0.001$). This indicates that both teaching methods program was effective to develop asana performance in yoga.

Table 2: Results of *t*-test for independent groups in regard to effectiveness of the two teaching methods

Variable	N	X \pm SD	<i>t</i> value	Mean Difference
PTM	15	11.60 \pm 4.86	7.01*	12.20
CLM	15	23.80 \pm 4.66		

Figure 2: Change in performance of PTM and CLM groups



In Table 2, comparing the both methods with regard to effectiveness, *t*-test for independent groups was used, shows improvement in score of PTM group was 11.60 (± 4.86) and improvement in score of CLM was 23.80 (± 4.66). In which homogeneity of variances is tested using Levene's test for equality of variances were *F* value is 0.23 which statistically not significant. This indicates that variances of PTM and CLM group are homogeneous.

Mean difference between the PTM and CLM group of asana performance score is 12.20 (± 1.74). Change in performance (difference between the Post test score & Pre test score) was tested with Independent *t*-test, where *t* value is 7.01 which is statistically significant at 0.05 significant level ($p=0.001$). This indicates that there was better improvement in CLM group ($M= 23.80$) than PTM group ($M= 11.60$). This indicates the effectiveness of CLM over PTM.

4. DISCUSSION

In the education process, the most important factor affecting the required quality is preparation & application of a dynamic education program. In this application process, teachers help facilitate free thinking, creativity, & problem solving principles using teacher-centered & student-centered teaching methods (Chen, 2001; Sendhil, & Kannappan, 2014). The particular method chosen by teachers plays an important role in teaching effectiveness (Sidentop, 1991; Hasmukh, Nagendra, & Mahadevan, 2010).

The results of this study showed that both teaching methods had an effective role in teaching asana. Analysis done to compare the methods in regard to effectiveness shows statistically significant difference between these two methods. In which CLM shows better improvement than PTM. Results of studies done to investigate the effectiveness of various teaching styles and methods, in the teaching skill have also shown significant difference among them. For example, command style, practice and self-check style were compared in teaching long-high and short-low serves in badminton by Hasmukh, Nagendra, & Mahadevan (2010) and significant difference on performing the short-low serve were detected; students in the practice style were superior to students in the self-check style.

The study examined the effect of a sport education curriculum model, on handball performance of university students by Singh, (1997) concluded that sport education curriculum model was significant effective in acquisition of handball skills.

So, according to the results of these studies, there were statistically significant differences between teaching methods. Moreover, different sides of any motion can be changed according to the aims (Sidentop, 1991).

In summary results of this study showed that both teaching method had an effective role in teaching asana, so researcher accept the research sub hypothesis that there was significant effect of PTM and CLM on asana performance. Analysis done to compare the methods in regard to effectiveness there was better improvement in CLM group, than PTM group. This improvement may be due to motivation, effective teaching method, group goals, cohesiveness in the group, individual accountability, structuring group interaction, more correction and practice.

5. CONCLUSIONS

The observation of the experimental data, within limitations, help to conclude that, using presentation teaching and co-operative learning method there was improvement in performance of asana and apart this conclude that co-operative learning method was more effective than presentation teaching method to improve asana performance in yoga.

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A COMPARATIVE STUDY OF YOGIC TREATMENT ON SOCIABILITY AMONG REGULAR AND DROPPED OUT SCHOOL BOYS

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ABSTRACT

The purpose of the present study intended to find out of effects of yogasanas on sociability of Regular and dropped-out school boys. The investigators have also made an attempt to assess the superiority among experimental groups. Total one hundred and fifty (N=120) regular and dropped out school boys of District Howrah, West Bengal State were selected at randomly as subjects for the present study. The age limit of the subjects was 14-16 years. All the Regular school boys (n=60) were divided into two equal groups such as Gr. RY was experimental group and Gr. RC served as control group. Selected Dropped-out school boys (n=60) also divided into two equal groups such as Gr. DY was experimental group and group Gr. DC served as control group. Sociability Questionnaire designed by Jonathan which was employed as an adapted form to all the subjects of Gr. RY, Gr. DY, Gr. RC and Gr. DC and thereafter specific yogic treatment was given to Gr. RY and Gr. DY for four day in a week and continued three months and finally the subjects were retested on criterion measures. The data were analysed by paired t-test to find out the effects of the treatment. The results of the present study showed that the social ability was improved significantly at .05 level of confidence among Gr. RY and Gr. DY group after three months yogic treatment. Sociability of Gr. RY and Gr. DY were improved significantly after three months treatment.

Keywords: Yoga, sociability, self-concept, social-anxiety.

1. INTRODUCTION

Yoga is a science of right living and as such, is intended to be incorporated in daily life. It works on all aspects of an individual viz. the physical, vital, mental, emotional, psychic and spiritual (Jee, 2012). The science of yoga has always been dedicated to the physical, mental and spiritual health of all mankind not to

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particular religion or nationality throughout the world. The word yoga means the communion of the petty self with the universal self. Prior it is recognised that psychology is the science of the psyche or soul. Therefore yoga psychology signifies the science of unification of the lower self with the higher one (universal self), the union of the jivataman with the Paramatman so to speak (Prajnanand, 1967). Practically, Yoga is harmony in all walks of life. It is an art and science of healthy living.

In accordance with the culture, social system and environmental factors and its mental set Indians frequently use yoga as the means of getting relief from the bondage of physical, mental and spiritual spirit. Surprisingly, use of yoga for health is frequently used in USA also according to the 2007 National Health Survey (NHIS), which included a comprehensive survey of CAM used by Americans Yoga is one of the top 10 CAM modalities used. More than 13 million adults had used yoga in their life. The 2007 survey also found that more than 1.5 million children used yoga in the year (Barnes, Bloom, & Nahin, 2008).

Sociability refers to the skill, tendency or property of being sociable or social, of interacting well with others ability or characteristic of a person who deals easily with social performance situation (Thakur, 2013). Sociability includes psychological and social attributes, which can influence individual's attitudes, habits, beliefs and ideas (Khalsa, Hickey-Schultz, Cohen, Steiner, & Cope, 2012; Ahsan, 2014). You can say sociability is a personality trait, the ability to be fond of the company of others, people who are sociable are inclined to seek out the opportunity of social contact with others. Knowledge about self, like self-esteem, self-efficacy, self-concept helps an individual to mingal with society or group (Khan, Ali, & Ahmed, 2014; Ahsan, 2014). Yoga contributes a great deal to the development of socialization utilized by an individual to understand himself and others, to direct his own behavior (Burton, 1971). School going boys are in school curriculum, school discipline, good peer group, most of cases, they are good socio-economic condition and good family environment but school dropped out boys were not above condition (Rumberger, 1995).

Yogic practices help the students achieve mental, emotional and physical balance. Yoga improves fitness, promotes relaxation, develops self-concept, self-confidence, positive attitude, etiquette, empathy and sociability and reduces stress as well as anxiety (Khan, Ali, & Ahmed, 2014; Ahsan, 2014). Social ability refers to the ability or characteristic of a person who deals easily with social performance situation.

The purpose of the present study intended to find out the effects of yogasanas on sociability among regular and dropped-out school boys. The investigators have also made an attempt to assess the superiority among experimental groups.

2. METHODS AND MATERIALS

2.1 Subjects

Total 120 (60 regular and 60 dropped-out) school boys of Howrah, West Bengal, India were selected as subjects for the study. The age of the subjects was ranged from 14-16 years. Regular school boys (n=60) were further divided into two equal groups such as Gr. RY (n=30) and treated as experimental group, and Gr. RC (n=30) served as control group. Dropped-out school boys (n=60) also divided into two equal groups as Gr. DY (n=30) which is known as experimental group and remaining Gr. DC (n=30) served as control group.

2.2 Tools

The Sociability Questionnaire was designed by Jonathan, and Associate was used in the study. The questionnaire was employed as adapted form and standardized by experts of psychologist and statistician. The test was constructed with five categories of information that are related to socialization. These categories are: (i) Concept and self, (ii) Social anxiety, (iii) Feelings toward parents and degree of independence, (iv) Knowledge of social etiquette, and (v) Empathy.

2.3 Procedure

Sociability questionnaire used to all the subjects of Gr. RY, Gr. DY, Gr. RC and Gr. DC and thereafter specific yogic treatment was given to Gr. RY and Gr. DY for four days in a week and continued three months and finally the subjects were retested on criterion measures.

2.3.1 Treatment Consists of Following Yogic Treatment

2.3.1.1 Asanas: Padmasana, vajrasana, salavasana, shashankasana, triyaka tadasana, bhujangasana, supta vajrasana, gomukhasana, viparitarani mudrasana, sarvangasana, halasana, dhanurasana, chakrasana, matsyasana, padahastana, ek-padasana, ekpada paschimottanasana, janusirasana, uttanapadasana, pavan muktasana and makarasana were considered as element of the treatment. The subjects of Gr. RY and DY were practiced savasana and makarasana as a means of relaxation for 30 sec before and after practice of each asana, pranayama and kriya during treatment. Duration and repetition and degree of difficulty were increased gradually at four phases during the treatment season.

2.3.1.2 Pranayama: Anulama biolam, chandra bhavana, surya bhavana.

2.3.1.3 Kriya: Kapalabhati and Trataka.

2.4 Statistical Analysis

All the data of sociability was collected from Gr. RY, Gr. RC, Gr. DY and Gr. DC and it was analysis by t-test and level of significant was set up at .05 level of confidence. To be significant t-values should be greater than 2.04.

3. RESULTS

Sociability scores of all the groups were analyzed by *t*-test and level of significance was set up at .05 level of confidence.

Table 1: Group means increase in sociability among Gr. RY and Gr. RC after three months treatment

Variable	Type of test	Gr. RY (n=30)			Gr. RC (n=30)		
		Mean	SD	<i>t</i>	Mean	SD	<i>t</i>
Sociability	Pre-test	18.63	1.56	5.28*	18.55	1.80	0.002
	Post-test	23.83	1.55		20.3	1.89	
*Significant				Tabulated $t_{0.05(28)}= 2.05$			

Table 1 represents the mean values of pre and post test for sociability of Gr. RY and Gr. RC. The mean values of pre-test and post-test of Gr. RY were 18.63 and 23.83 respectively. On the other hand, the mean values of pre-test and post-test of Gr. RC were 18.55 and 20.3 respectively. The *t*-value of sociability of Gr. RY was 5.28 and the *t* value of Gr. RY in relation to improvement of sociability was significant at 0.05 level of confidence after three months treatment. The *t*-value of sociability of Gr. RC was 0.002. To be significant at 0.05 level of confidence the *t*-value should be greater than 2.04. The *t*-value of Gr. RC was not improved significantly at 0.05 level of confidence after one year treatment.

Table 2: Group means increase in sociability among Gr. DY and Gr. DC after three months treatment

Variable	Type of test	Gr. DY (n=30)			Gr. DC (n=30)		
		Mean	SD	<i>t</i>	Mean	SD	<i>t</i>
Sociability	Pre-test	15.63	1.88	5.71*	15.76	1.68	0.016
	Post-test	20.86	1.83		16.73	1.72	
*Significant				Tabulated $t_{0.05(28)}= 2.05$			

Table 2 represents the mean values of pre and post test for sociability of Gr. DY and Gr. DC. The mean values of pre-test and post-test of Gr. DY were 15.63 and 20.86 respectively. On the other hand, the mean values of pre-test and post-test of Gr. DC were 15.76 and 16.73 respectively. The *t*-value of sociability between pre and post test of Gr. DY was 5.71 and the *t*-values of Gr. DY in relation to improvement of sociability were significant at .05 level of confidence after three months treatment. The *t*-values of sociability between pre and post test of Gr. DC were 0.016. To be significant at .05 level of confidence the *t*-value should be greater than 2.04. The *t*-value of Gr. DC was not improved significantly at .05 level of confidence after one year treatment.

Table 3: Comparison of mean gain in sociability of Gr. RY and Gr. DY after three months treatment

Group Compared	Sociability		
	Mean	SD	<i>t</i>
Gr. RY	5.2	0.55	0.04
Gr. DY	5.23	0.50	

Table 3 represents the comparison of mean gain in sociability among Gr. RY and Gr. DY after three months treatment. Mean values of Gr. RY and Gr. DY were 5.2 and 5.23 respectively in sociability. The *t*-values between Gr. RY and Gr. DY was 0.04 and the *t* values between Gr. RY and Gr. DY in relation to improvement of sociability were not significant at .05 level of confidence after three months treatment. Significant at 0.05 level of confidence *t*-values should be greater than 2.04.

4. DISCUSSION

Results of the study documented that experimental group improved sociability significantly at .05 level of confidence. In this study school dropped out boys who were received yogic treatment for three months improved self-concept, reduce social anxiety, develop the knowledge of social etiquette and improved empathy. They also developed the good and positive feelings about their parents and country. Ekeland, Heian, Hagen, and Coren, (2005) have reported that yogasanas have greater impact on sociability as well as self-concept and self-esteem.

There were many reasons for school dropped-out and these were employment, avoid bullying, family emergency, poor grades, depression and other mental illnesses, bad environment and lack of freedom. The consequences of dropping out of school can have long-term economic and social repercussions. Students who drop out of school in the India are more likely to be unemployed, homeless,

receiving welfare and incarcerate. That might be one reason for such sort of findings.

5. CONCLUSIONS

Under the conditions of the present study the results seemed to conclude that the following:

- The significant improvement of social ability was observed by administering three months treatment of yogic practice among regular school boys but no significant improvement was observed among control group in comparison of sociability after three months treatment.
- The significant improvement of social ability was observed by administering three months treatment of yogic practice among dropped-out school boys but no significant improvement was observed among control groups in comparison of sociability after three months treatment.

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ACHIEVEMENT MOTIVATION OF INDIAN FIELD HOCKEY PLAYERS AT THREE DIFFERENT LEVELS OF COMPETITIONS

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ABSTRACT

This study conceptualized to compare the achievement motivation of Indian field hockey players at three different levels of competitions. To work on the purpose of the study 300 male Indian field hockey players played at different levels of competitions were selected. The age of the participants ranged from 17 to 25 years. For the purpose of the present study three strata were made, inter-collegiate, north-zone intervarsity, and all India intervarsity hockey players. Stratified random sampling technique (proportionate) was done and 100 participants were selected for each stratum. Achievement motivation of the subjects was measured by using sports achievement motivation test developed by Kamlesh (1990). In order to find-out the achievement motivation of the field hockey players of different levels of competitions, One Way Analysis of Variance (ANOVA) was used to find out the significant difference among inter-collegiate, north-zone intervarsity and all India intervarsity level field hockey players. To know more about the pattern of differences existing within a set of population means, Least Significant Difference (LSD) Post-hoc test were used. The significance was tested at 0.05 level. Results of the study showed that significant difference exists among inter-collegiate, north-zone intervarsity and all India intervarsity level hockey players on achievement motivation. Thus it can be concluded that achievement motivation as one of the most important psychological component that influence the performance of the field hockey players.

Keywords: Achievement motivation, field hockey, inter-collegiate, north-zone intervarsity, all India intervarsity.

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1. INTRODUCTION

Field hockey occupies a significant place in India and regarded as a national game of the country. Being the national game of India, obviously hockey considered a game of masses wherein India reigned supreme starting from its debut in 1928 till 1960 Olympics when they first time lost to its neighbour Pakistan in the finals. Later on in due course of time India regained its lost glory at Tokyo in 1964. Thereafter an unprecedented decline in the performance of Indian hockey team started, and in recently concluded Olympics shows Indian lost their supremacy in the world of field hockey.

The experts in the field believe that there have been numerous factors which are responsible to this decline in the performance. Despite of the declined performance of Indian team in premier tournaments, Indian team is still being considered one of the world's best teams. In today's game of hockey merely techno-tactical soundness is not enough. There is still need to learn as well as develop all those factors on which present day performance in hockey lies. Keeping in view the demand of the today's game it is documented that psychological makeup of players is one of the significant factors in the performance determination. Among different psychological parameters, achievement motivation is one of the major psychological factor which is associated with the performance determination.

Achievement motive is an impulse to master challenges and reach a high standard of excellence. Achievement motivation can be defined as the athlete's predisposition to approach or avoid a competitive situation. In a broader sense, it includes the concept of desire, or desire to excel. The desire to achieve success in sport is not an innate drive, such as hunger or thirst, but is likely one that is developed or learned in the sporting environment.

Motivation is a one of the significant psychological trait, but limited researches have been directed towards defining the competitive specific motivational profile of elite Indian hockey players (Raglin, Morgan & Luchsinger, 1990). After reviewing of literatures and motivation theories, it has been found that motivation is an essential element of human personality. It directs a person's activities and makes it more or less dynamic. Without the desire to success other psychological features and abilities do not provide nearly so much influence on performance. Motivation plays important role in determining the extent to which a player can face challenges or difficulties. It has one of the greatest impacts on the sport person's ability to achieve. A proper motivated player has not lost his or her self-concept and stable in stressful conditions.

Motivation is a frequently studied theme in various areas such as business, (Shwalb, Shwalb, Hamisch, Maehr & Akabane, 1992), sports (van Heerden, 2014; Ahmadi, Namazizadeh, Abdoli & Seyyed, 2009; Ali, Hussain & Rahaman, 2010;

Haider, 2012; Kaur, Sharma & Dureha, 2007; Cumming & Ste-Marie, 2001; Martin & Hall, 1995; Theodorakis, Weinberg, Natsis, Douma & Kazakas, 2000; Munroe-Chandler, Krista & Hall, 2005; Solmon, 1996; Tappe, Duda & Menges-Ehrnwald, 1990; Nicholls, 1984; Duda & Nicholls, 1992) and education (Ames & Archer, 1988). Motivation is a strong desire to be more than one can be, to do more than one can do in other words it describes why some people choose to participate in different activities, try harder, and persist longer than others.

The main factor bringing achievement motivation into existence is the need for achievement (Murray, 1938). The need for achievement shows itself as a desire to complete a task or behavior according to perfection criteria or even better than these criteria. For instance, doing something much more than the rivals, reaching or obtaining difficult goals, solving complex problems, improving skills, and completing homework successfully show the need for achievement.

McClelland claims that individuals with high achievement need to take reasonable risks prefer activities that can be achieved easily reach inner satisfaction stemming from their successes and do not care for anything except their tasks. Low need for achievement is thought to be associated with a sense of low competence, low expectations, and orientation toward failure (Atkinson, 1964; Atkinson, 1977).

There are various studies conducted in the aspect of achievement motivation and their effects on performance. Studies suggest that achievement motivation is most significant predictor of performance and there is a significant positive relationship between high level of achievement motivation and sports performance (Huschle & Katie, 2008; Aktop & Erman, 2006; Shafizadeh, 2007; Sheldon & Eccles, 2005; Tjeerdsma, 1994; Maxson, 1982; Mesug, 1978; Wills, 1968) several motivation theories in the academic area have been adopted in the quest for greater understanding of achievement motivation in sports (Ames, 1984a; Ames, 1984b; Dweck, 1986; Nicholls, 1989).

In India hockey is played by all levels of competition, the purpose behind this study is to know, at different level of participation what the status of achievement motivation of the players is. Then we can only guide and suggest our players about the actual need and importance of the achievement motivation.

2. METHODS AND MATERIALS

2.1 Participants

The present study was conducted on 300 male Indian field hockey players played at different levels of competitions. The age of the participants ranged from 17 to 25 years. The samples were collected randomly from different competitions in different time. For the purpose of the present study three strata were made, inter-

collegiate (those players were selected who were not playing north-zone intervarsity and all India intervarsity), north-zone intervarsity (those players who were not playing all India intervarsity) and all India intervarsity hockey players. Stratified random sampling technique (proportionate) was done and 100 participants were selected for each stratum.

2.2 Tools

Achievement motivation of the subjects was measured by using sports achievement motivation test developed by Kamlesh (1990). The test consists 20 incomplete statements which were to be completed by choosing either of the two proposed parts against each statement. Each statement has a maximum 2 and minimum 0 as a response value. The response value ranged from 0-40. The test-retest reliability of questionnaire is 0.70.

2.3 Procedure of Data Acquisition

The researcher initially tried to contact to organizing authorities of tournaments and received permission to collect the data. The managers and coaches of all the respective teams were contacted personally and were explained the purpose and significance of the study and request to permit their respective team members to take as subjects for this study. Convenient meeting dates, time and place arranged with teams managers, coaches and captains. Before filling the questionnaire instructions printed on the questionnaire were explained verbally so that the subjects do not hesitate to give their honest, personal and frank response in the correct manner. Before the filling actual questionnaires, each participant completed a background information such as age, participation in game, and level of participation. This information was used to determine motivation characteristics of the participants. The questionnaires were responded in a quiet, comfortable, and familiar environment at the participant's living rooms and grounds.

2.3 Statistical Analysis

In order to find-out the achievement motivation of the field hockey players of different levels of competitions, data were summarized by descriptive statistics (mean, standard deviation). One Way Analysis of Variance (ANOVA) was used to find out the significant difference among inter-collegiate, north-zone intervarsity and all India intervarsity level field hockey players. To know more about the pattern of differences existing within a set of population means, Least Significant Difference (LSD) Post-hoc test were used. The significance was tested

at 0.05 level. All the statistical procedure was performed with the help of SPSS (V.19).

3. RESULTS

Table 1: ANOVA summary on achievement motivation among inter-collegiate, north-zone intervarsity and all India intervarsity level field hockey players

Source of Variance	<i>df</i>	<i>SS</i>	<i>MSS</i>	<i>F</i>
Between Groups	2	8658.34	4329.17	247.87*
Within Groups	297	5187.24	17.46	
Total	299	13845.58		
*Significant			Tab. $F_{.05}(2, 297) = 3.03$	

A cursory glance over table 1 reveals that the computed value of F -ratio (247.87) is more than the tabulated value of F -ratio (3.03). It is concluded that there is a significant difference exists among inter-collegiate, north-zone intervarsity and all India intervarsity level hockey players on achievement motivation. Further to analyze which level of players had better achievement motivation, pair wise mean's comparison analysis had been done by using Least Significant Difference (LSD) Post-hoc test and its results is presented in the upcoming table 2.

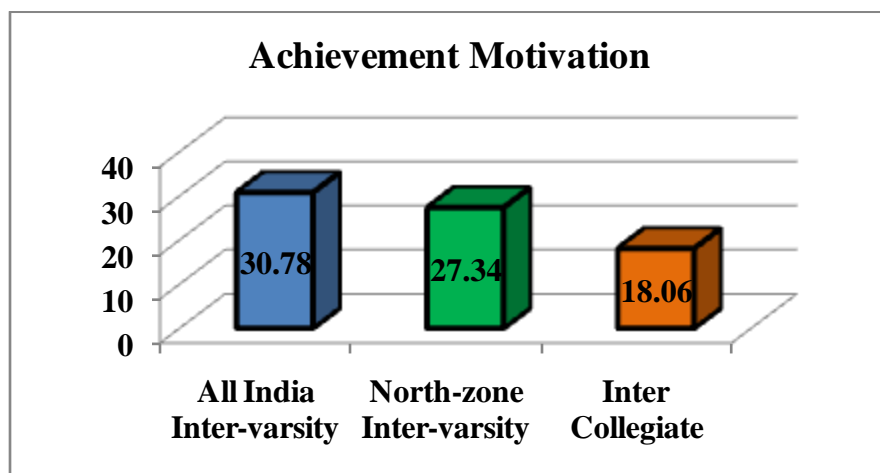
Table 2: LSD Summary on Achievement Motivation

Mean Value			<i>MD</i>	<i>Sig.</i>
All India Inter-varsity	North-zone Inter-varsity	Inter Collegiate		
30.78	27.34		3.44*	.000
30.78		18.06	12.72*	.000
	27.34	18.06	9.28*	.000

*Significant at .05 level

Comparison of pair wise difference of means with tabulated difference, it is apparent from the table 2 that there is a significant difference between All India intervarsity and north-zone intervarsity ($MD = 3.44$); All India intervarsity and Inter-collegiate ($MD = 12.72$); and north-zone intervarsity and inter-collegiate ($MD = 9.28$) level hockey players.

Figure 1: Illustration showing means comparison among inter-collegiate, north-zone intervarsity and all India intervarsity level field hockey players



4. DISCUSSION

The purpose of the study was to determine the significant difference among inter-collegiate, north-zone intervarsity and all India intervarsity level field hockey players on achievement motivation. The results of the study revealed that there was significant difference among inter-collegiate, north-zone intervarsity and all India intervarsity level hockey players on achievement motivation. The inferences drawn by the researcher are supported by the following research findings of Khan, Khan, Chauhan and Ahmed (2012), Khan, Khan and Ahmed (2010), Ali (2010). The findings of the present study are also consonance with the study of Rathee and Singh (2011), Unierzyski (2003), Dureha, Singh, Yadhuvanshi and Mishra (2010), Haider (2012), Ibrahim and Gwari (2011) they all reported that higher level of performance group had higher level of achievement motivation in comparison to lower level of performance group. Aktop and Erman (2006) concluded that more experienced and successful athletes had higher level of motive to achieve success than less experienced and unsuccessful athletes. Kavussanu and McCauley (1995) reported that there was a significant difference between elite and non-elite athletes in respect of achievement motivation. They

concluded that elite level athletes had higher level of achievement motivation than non-elite athletes.

This difference might be due to the motivational climate, social environment, personal and parental support, educational level and socio-economical status of the parents. Motivational climate or sports environment have positively as well as negatively impact on the sports achievement motivation such as school environment, hinder or support the academic achievement motivation of the students (Esposito, 1999; Goodenow, 1994; Mouton & Hawkins, 1996). It was also found that most of the field hockey players belonged to below average in socio-economical status and average in educational background family. Some of researchers believed that socio-economical status does not affect the adolescents achievement motivation and academic performance (Maya, 2001; Ogunshola & Adewale, 2009) and educational background of the parents does not affect the achievement motivation in sports (Acharya & Joshi, 2010). It is very difficult to justify that whether economical status and educational level of parents effect the achievement motivation of the players, but If we read the biography of the remarkable hockey players around the world and we can see similarities among them (all India inter-varsity and hockey legends of the world), they belonged to average below socio-economical family but they have higher level of achievement motivation in sports.

The results might be due to the educational level, age and residential environmental conditions of the players. Haider (2012) concluded that age, education level, locality of residence and socio-economical status affect the achievement motivation of adults. Maqbool (2002) and Rehman (2001) reported that adult having higher level of education have higher level of achievement motivation as compared to those who have lower level of education. Harter (1998) and Wigfield and Eccles (2002) concluded that achievement motivation is positively and significantly correlated to the experience. Phillips and Zimmerman (1990), Paris and Cunighen (1996), Marsh and Hau, (2003) concluded that younger children tend to have positive and optimistic view about one's level of achievement.

5. CONCLUSIONS

On the basis of the findings of the study it was found that there is significant difference exists among inter-collegiate, north-zone intervarsity and all India intervarsity level hockey players on achievement motivation. Thus it can be concluded that achievement motivation as one of the most important psychological component that influence the performance of the field hockey players, without this, all the tasks will become uninteresting. No person can achieve higher goals unless he or she is properly motivated to do so.

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Manuscripts should be type written in fluent English (using 12-point Times New Roman font and 1.5 line-spacing) on of A4 sized paper justified fully with 3cm margin on all sides. In preparing manuscripts, MS-Word, Office 2007 for Windows should be used. Length of manuscripts should not normally exceed 15 printed pages (including tables, figures, references, etc.). Authors will be requested to pay a publication fee to defray the very high cost of publication. The pages of manuscripts must be numbered sequentially beginning with the title page. The presentation and reference format should be in line with the style prescribed in the publication manual of the American Psychological Association (APA) 8th edition.

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Title Page: The title page of the manuscript should contain the following information:

Concise and informative title.

Author(s') name(s) with first and middle initials. Authors' highest qualifications and main area of research specialization should be provided.

Author(s') institutional addresses, including telephone and fax numbers.

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A short running title of not more than 6 words.

Abstract: An abstract of 250-300 words is required with up to a maximum of 5 keywords provided below the abstract. Abstract must be typed on a separate page using single line spacing, with the purpose of the study, methods, major results and conclusions concisely presented. Abbreviations should either be defined or excluded.

Text: Text should carry the following designated headings also using 1.5 line-spacing: Introduction, materials and methods, results, discussion, conclusions, acknowledgement, and references.

Introduction: The introduction should start on a new page and in addition to comprehensively giving the background of the study it should clearly state the problem and purpose of the study. Authors should cite relevant references to support the basis of the study. A concise but informative and critical literature review is required.

Materials and Methods: This section should provide sufficient and relevant information regarding study participants, ethics/informed consent, instrumentation, research design, validity and reliability estimates, data collection procedure, statistical methods and data analysis techniques used. Qualitative research techniques are also acceptable.

Results: Findings should be presented precisely and clearly. Tables and figures must be presented separately or at the end of the manuscript and their appropriate locations in the text indicated. The results section should not contain materials that are appropriate for presentation under the discussion section. Formulas, units and quantities should be expressed in the system international (SI) units. Colour printing of figures and tables is expensive and could be done upon request at authors' expense.

Discussion: The discussion section should reflect only important aspects of the study and its major causes. Information presented in the results section should not

be repeated under the discussion. Relevant references should be cited in order to justify the findings of the study. Overall, the discussion should be critical and tactfully written.

Conclusion: In this section main conclusion of the study based on the findings should be written.

Acknowledgement: Acknowledgement should appear at the end of the text.

References: The American Psychological Association (APA) format should be used for referencing and citations. Only reference cited in the text should be alphabetically listed in the reference section at the end of the article. References should not be numbered either in the text or in the reference list.

Authors are advised to consider the following examples in referencing and citations:

Examples of citations in body of the text:-

For one or two authors; Mohammad (2014) and Mohammad and Hussain (2012). These references should be cited as follows when indicated at the end of a statement: (Mohammad, 2014); (Mohammad & Hussain, 2012).

For three or more authors cited for the first time in the text; Hussain, Mohammad, Khan and Bari (2013) or when cited at the end of the statement as in the preceding example; (Hussain, Mohammad, Khan & Bari, 2013). For subsequent citations of the same reference it suffices to cite this particular reference as: Hussain et al. (2013).

Multiple references when cited in the body of the text should be listed chronologically in ascending order, i.e. starting with the oldest reference. These should be separated with semi colons. For example, (Wilsmore & Curtis, 1982; Reilly & Borrie, 1992; Boddington, Lambert, Gibson & Noakes, 2002; Hussain & Mohammad, 2010; Lyle, 2012).

Where reference is made to more than one work by the same author published in the same year, identify each citation in the text as: (Hussain, 2012a), (Hussain, 2012b).

In compiling the reference list at the end of the text the following examples for journal reference, chapter from a book publication, proceeding of seminar conferences and electronic citation should be considered:

Examples of journal references:-

Journal reference should include the surname and initials of the author(s), year of publication, title of paper, name of the journal in which the paper has been published, volume and number of journal issue and page numbers.

For One Author: Hussain, I. (2011). Kinematics of penalty stroke in field hockey when it is executed at 90 degree stance position. *Entire Research*, 3(1), 62-65.

Two to Seven Authors [List all authors]: Hussain, I. Ahmed, S. & Khan, S. (2012). Biomechanical study on drag flick in field hockey. *International Journal of Behavioral Social and Movement Sciences*, 1(3), 186-193.

Eight or More Authors [List the first six authors, ... and the last author]: Murtaza, S.T., Imran, M., Ahmad, T., Sharique, M., Jabin, F. Ahmad, S., ... Zakir, M. (2014). Construction & standardization of fielding test in cricket. *Indian Streams Research Journal*, 4(8), 01-08.

Journal Article In Press: van Heerden, C.H. (2014). Expressed motives of students for sport participation in a South African context. *Journal of Physical Education Research*, In press.

Journal Article, Article Not in English: Seker-Aygül, Z., Akova, B. and Gür, H. (2001). The relationship of stress and stress management factors with injury in soccer players. *Turkish Journal of Sports Medicine* 36, 71-80. (In Turkish: English abstract).

Magazine Article: Mathews, J., Berrett, D., & Brillman, D. (2005, May 16). Other winning equations. *Newsweek*, 145(20), 58-59.

Newspaper Article with No Author and Discontinuous Pages: Generic Prozac debuts. (2001, August 3). *The Washington Post*, pp. E1, E4.

Examples of book reference:

Book reference should specify the surname and initials of the author(s), year of publication of the book, title, edition, page numbers written in brackets, city where book was published and name of publishers. Chapter reference should include the name(s) of the editor(s) and other specific information provided in the third example below:

For Authored References: Arora, M. (2005). *Hockey coaching manual* (2nd ed.) (pp. 25-29). New Delhi, India: Sports Publication.

Corporate Author with an Edition and Published by the Corporate Author: American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

Anonymous Author: *Dorland's illustrated medical dictionary* (31st ed.). (2007). Philadelphia, PA: Saunders.

For Edited References: Amusa, L.O. & Toriola, A.L. (Eds.) (2003). *Foundations of sports science* (2nd ed.) (pp. 39-45). Makhado, South Africa: Leach Printers.

Books Not in English: Dizdar, D. (2006). *Kvantitativne metode*. [Quantitative methods. In Croatian.] Zagreb, Kineziološki fakultet Sveučilišta u Zagrebu.

Examples of Seminar's Proceeding Reference:

For One Author: Ferdinands, R.E.D. (2010). Advanced applications of motion analysis in sports biomechanics. In R. Jensen, W. Ebben, E. Petushek, C. Richter, & K. Roemer (Eds.), *28th International Conference of Biomechanics in Sports*, (pp. 70-73) Marquette, Michigan, USA: Conference Proceedings Archive, ISBS.

For Multiple Authors: Hussain, I., Mohammad, A. & Khan, A. (2011). Biomechanical analysis of successful and unsuccessful penalty stroke execution in field hockey. In S. Tyagi, A.K., Vanaik, L. Sharma, & T.N. Pramanik (Eds.), *International Conference on Physical Activities & Sports for Global Peace & Development*, (pp. 35-39), New Delhi, India: Sports and Spiritual Science.

Examples of Electronic Resources (computer software, computer and information services, on-line sites) reference:

Electronic sources should be easily accessible. Details of internet website links should also be provided fully. Consider the following example:

Joseph, S. (2012). Techno-tactical characteristics of pushers stance for penalty corner pushes in field hockey. Research Conducted at National Sports Institute (ISN), Malaysia. Available online at: <http://www.isn.gov.my/en/downloads/category/12-newsletter?download=40:isn-today-june-2012> (Accessed December 20, 2012).

AOSSM (2004). *Sports medicine update. Newsletter of the American Orthopaedic Society for Sports Medicine*. Available online at: <http://www.sportsmed.org/secure/reveal/admin/uploads/Documents/SMU2004MayJun.pdf> (Accessed 1 January 2005).

Nonprinted Media (Abstract on CD-ROM) Reference:

Meyer, A.S., & Bock, K. (1992). The tip-of-the-tongue phenomenon: Blocking or partial activation? /CDROM/.